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***Central Eurasia:
Science & Technology Policy***

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Commentary on Reorganization of Nuclear Industry, Research

927A0162A Moscow RADIKAL in Russian
No 6, Feb 92 p 11

[Interview with Vladimir Asmolov, director of the department of the safety of nuclear power engineering of the Russian Kurchatov Center, by Sergey Stepanenko under the rubric "A World Without Safety"; date and place not given: "Nuclear Fission Ministry-Style"—first 11 paragraphs are RADIKAL introduction]

[Text] It is necessary to give the creators of the atomic giant their due. Sredmash [the Ministry of Medium Machine Building] lived like a state within a state. It had everything of its own: from tremendous nuclear charges and a mining industry to gold and its own agriculture with elite herds and the delivery of May cherries to the children of the Novaya Zemlya test range.

The breaking of the monster on the wheel began with the appearance of the CIS [Commonwealth of Independent States]. The components of the Ministry of Atomic Power and Industry are scattered throughout the former Union. The production of plutonium and enriched uranium and the making of nuclear weapons—in Russia, fuel ceramics—in Kazakhstan, ore-mining sectors—Ukraine, Central Asia, Kazakhstan. Also add here nuclear power plants with their components.

What will the structure of the nuclear complex in Russia be? How will it interact with the other states of the CIS or countries, which have a nuclear potential, including nuclear power engineering? How will it fulfill the international obligations of the former Union? In recent months cabinet battles of far from local importance have developed at the headquarters of the sector. Battles of different world outlooks. And it is unclear whose outlook will win.

Judging from the statements of witnesses, in the ministry they believe that in Russia it is necessary to set up a small committee for atomic energy, which will assume specific functions with respect to nuclear power plants, and simultaneously an enormous corporation (precisely with the name Sredmash, it seemed to the leadership), to which all the components of the former ministry, including nuclear weapons production, will belong.

First, the sign "Committee for the Utilization..." is a stage that was gone through not that long ago. It existed. As I remember, A. Petrosyants was listed as its director. Second, and the main thing, the Ministry of Atomic Power and Industry, while fulfilling special-purpose state assignments, still coped somehow. If it becomes a corporation, then, obeying the laws of economics, in a while it will live its own internal life. Considering the scale and potential of such an establishment, it is easy to assume that it will begin to dictate its own terms to its associates.

To my knowledge, similar processes are occurring in all the ministries of the "magnificent nine" of the military-industrial complex. The idea is the same: to keep, to preserve, not to lose, not to give up. Imagine for a minute that these supergiants gather in a circle and shake hands....

The opposing side does not deny that the economic activity in the area of nuclear weapons production should be in the hands of the ministry, but under vigilant state control. Everything that concerns the civilian use of atomic energy—sorry. Ministry only formulates state programs (of course, on a competitive basis, putting together for this temporary commissions and paying their members as experts) and confirms the programs in the Supreme Soviet (which will be the guarantee of their budget support, for basic research, which will never be able to be cost accounting, should also be included here), while the functions of the complete economic conducting of affairs and the disposal of assets should be transferred to enterprises and scientific research institutes, which will work on these programs.

As experts believe, then it will not be necessary to keep 4,000 administrators. Three hundred to 400 specialists will be quite enough. And the main thing: Ministerial specialists will cease to be benefactors at the feed box—to give to anyone, but someone will begin to lick the hand.

For example, the situation with nuclear power plants. It is most likely of all that in the regions they will set up their own firms or power companies for their operation. The discussion has been going on for more than a year: If, they say, these are local organizations, the confidence of the population in them is much greater. You will agree, it is a factor of no small importance today.

Power companies, which are interested in a specific design, will be able to order it independently (on a competitive basis) from interested scientific research institutes and design bureaus. Everything falls into its places: There is a buyer, there are sellers who offer a commodity. And no operating firm, which bears full responsibility for the safety of a nuclear power plant, will accept a design, if with regard to some parameters it does not suit it.

I would like to speak separately about the safety of nuclear power plants. The Institute of Atomic Energy imeni I.V. Kurchatov—and now the Russian Kurchatov Center—is no longer a part of the system of the Ministry of Atomic Power and Industry. Therefore, I addressed to Vladimir Asmolov, director of the department of the safety of nuclear power engineering of the Center, the question of the attitude toward such orders.

[Asmolov] We are ready to work as an independent scientific research institute. If a developer asks us for assistance, by all means, if a plant appeals to us, with pleasure. They give us work and pay for it. The western world has lived in this system all its life, we are just at the start of the path. As a result there are distortions. For

example, a mass of "prokhindeys" and rogues, who are passing themselves off as scientists, and small enterprises, which claim that they can do everything, has appeared. They promise, receiving for this alone 10 million rubles....

[Stepanenko] But can they express the same distrust of us as well?

[Asmolov] There should be one criterion—the professional level of the organization. And it knows the standard—advanced world know-how. If we do not conform to it, thus, we cannot work. Now all our research is open, and international arbitrators can check it. For example, the commission of the EEC, which chooses captiously with whom it will cooperate.

For example, Ukraine organized its own nuclear safety inspection commission. They brought specialists together at random, and there will be enough fingers on your hands to count them. There they understand that they cannot manage without us. They chose, in my opinion, the correct direction: To switch from the supervision of the safety of nuclear power plants to the issuing of licenses to each reactor for the continuation of operation. In this case one cannot do without a complete report on the current state of the safety of the facility. In order to draw up a report on the designs—some of they are 20 years old—a complete review of the safety of the given plant is needed. Now together with Ukrainian colleagues we are performing such work at the Rovenskaya plant. But since its units are nearly analogous to nuclear power plants in Hungary and Czechoslovakia, the project is turning into an international one—under the aegis of the International Atomic Energy Agency.

[Stepanenko] Does this not point to the once again increasing interest in nuclear power engineering?

[Asmolov] Your amazing ability to switch rapidly from cold to hot astonishes me. I do not deny it, there were many just reproaches directed at nuclear power engineering. Now its renaissance is beginning just as quickly. One of the postulates of the election program of L. Ter-Petrosyan was the shutdown of the Armenian Nuclear Power Plant. But after Chernobyl a careful analysis of the state of the units was made there and it was clearly shown what the station needs for complete safety and how much this costs. The complaints for the most part pertained to seismic surveying. Although, note, this was the only power facility that during the earthquake operated "excellently," when the site of the nuclear power plant was shaken with a six-point force. But they made the decision on the shutdown, and since 1989 the plant has not been operating.

Now Ter-Petrosyan as the leader of the country has to shovel aside the power engineering problems of Armenia. With regard to the present situation they are really clamoring: Plants are idle, there are no heat and light. The government made a new analysis, the results of which are clear: In seismicity Armenia differs in not way from Japan and the location of nuclear facilities on its

territory is entirely feasible. Now they have appealed to the world community for help in the resumption of the operation of the second unit and hope to start it up by next winter.

But the equipment stood idle for over three years! I do not know what the real state of things is there, but I believe that a complete inspection is needed. This takes half a year.

But the main thing in safety matters is the human factor. Where is one to recruit personnel? Who will go there to work for three years? A prospect is needed. Thus, it is necessary to develop further the nuclear power engineering of Armenia.

A similar situation exists in many regions. I emphasize, regions. The new authorities are making an inspection of power engineering, and the talk about nuclear power plants is reversing sign. Kazakhstan declares that it is not opposed to building several plants there, for there are no other, ecologically clearer sources of power. In Ukraine they are considering versions of the construction of nuclear power plants, in Lithuania the protests against the Ignalinskaya plant have subsided.

Moscow Scientists Protest Temporary RAS Statutes

927A0144A Moscow RADIKAL in Russian
No 5, Feb 92 p 10

[Resolution of the Meeting of Delegates of the Conference of Scientists of Academic Institutes of Moscow and Moscow Oblast]

[Text] Having heard the report on the consideration of the draft of the decree of the Supreme Soviet of the Russian Federation "On the Work of the Organizing Committee for the Organization of the Russian Academy of Sciences" and having become familiar with the text of the draft, which was submitted by the Committee for Science and Public Education of the Supreme Soviet, and the explanatory note to it, the meeting expresses bewilderment with regard to the position taken by the Supreme Soviet. In our opinion, in the mentioned documents the reasons, owing to which it is impossible to regard as completed the process of forming the Russian Academy of Sciences, are set forth in a well-argued and consistent manner and specific steps on bringing the Charter and the status of the RAS [the Russian Academy of Sciences] in line with Russian legislation, international documents, and the Ukase of the President of the Russian Federation are proposed. The fact that the basic substantive provisions of the draft of the decree were not adopted by the Supreme Soviet causes disappointment and testifies that the deputies of the Supreme Soviet did not attach proper importance to the most important question for Russia of the preservation and development of its scientific potential and did not look deep into the essence of the problem, which actually led them to the support of the old academic nomenclature, to the ignoring of the opinion and interests of rank and file

scientific personnel, and to conflict with their own decrees and the Ukase of the President of the Russian Federation.

The Temporary Charter of the RAS is not in keeping with the concept that was adopted at one time by the Supreme Soviet; in violation of Ukase No. 228 of the President of the Russian Federation of 21 November 1991 the suggestions of the conference of scientists of academic institutes are not taken into account in it; the Charter in its present form does not specify the legal status of the RAS. This last circumstance creates for all the people working at the RAS the situation of a legal vacuum and the impossibility of determining by which articles of existing laws to be guided and to require their fulfillment, and complicates the implementation of reforms that are connected with the transition to a market economy.

We call upon the Supreme Soviet to return to the consideration of the question of the Russian Academy of Sciences in order to:

establish the legal status of the RAS;

establish on the basis of the legal status of the RAS the legal regime of the possession, use, and disposal of the property and fixed capital of the RAS;

prepare legislative proposals that stipulate the procedure of the allotment and use of parcels of land, which are attached to institutions and organizations of the RAS;

prepare legislative proposals on questions of the taxation of organizations and institutions of the scientific sphere.

We also support the proposal on the establishment of a working group made up of people's deputies, who are personnel of science, for the formulation of the concept and the draft laws on science, which correspond to it.

We call upon the collectives of institutes to support our resolution and to inform the Supreme Soviet and the executive committee of the conference of scientists of the Russian Academy of Sciences about this.

Yeltsin Decrees on Basic Science, RAN Organization

927A0138A *Moscow RADIKAL in Russian*
No 46, 27 Nov 91 p 2

[Ukase of the RSFSR President "On the Development of Basic Science in the RSFSR" and Ukase of the RSFSR President "On the Organization of the Russian Academy of Sciences" with RADIKAL commentary, under the rubric "Reform in Science": "While the Department Intrigues...."]

[Text] Ukase of the RSFSR President "On the Development of Basic Science in the RSFSR"

Based on the exceptional importance of basic science as the basis of the social, national economic, and cultural development of Russia, I decree:

1. To form the Council for Science attached to the RSFSR President and the Russian State Basic Research Fund. To charge the RSFSR State Secretary in a one-month period to prepare the draft of the statute on the Council for Science.

The Council for Science jointly with the RSFSR State Committee for Science and the Higher School is to draw up the draft of the statute on the Russian State Basic Research Fund, having stipulated that state support of the academies of sciences and other scientific societies is carried out in accordance with the recommendations of the Council for Science.

2. The RSFSR Council of Ministers is to take steps to ensure the safekeeping of the buildings, fixed capital, and other property of the institutes, laboratories, enterprises, and organizations of the USSR Academy of Sciences, which are on the territory of the RSFSR. To hand over the parcels of land, which are being used by institutions and organizations, which at present belong to the USSR Academy of Sciences and are on the territory of the RSFSR, for their free use.

To prepare for submission to the RSFSR Supreme Soviet proposals on the exemption of scientific institutions and organizations from all types of taxes, duties, and tariffs in the area of currency assets that are channeled into basic research.

When drawing up the RSFSR budget for 1992 to ensure the base financing of the basic research, which is being conducted by institutions located on the territory of the RSFSR, at a level not less than the fourth quarter of 1990 (with allowance for inflation).

To prepare proposals on the increase of the social protection of the personnel of scientific institutions and organizations.

[POISK commentary] Everything seemed clear. The draft of the budget for 1992 is being prepared. Delay is tantamount to death. But no such luck!

Another draft was prepared behind closed doors, in secret.

Under the conditions of confusion, which formed at the White House at the moment of the reorganization of the government, the experts of the corridor system of administration decided to present their own version on the sly. The president was busy with the far more urgent conflict in the Caucasus. Watch, it will slip through on the quiet....

Fortunately, it did not slip through. And it is the right time to read and think over this document, and at the same time over what kind of people are these, who today have a monopoly on the management of science?

Ukase of the RSFSR President "On the Organization of the Russian Academy of Sciences"

Attaching great importance to the development of basic science as the basis of the economic, social, and cultural development of Russia, I DECREE:

1. To accept the proposal of the General Meeting of the USSR Academy of Sciences on the return to it of the name "the Russian Academy of Sciences."

To establish that the Russian Academy of Sciences is an all-Russian self-administered organization that operates on the basis of the laws of the USSR and the RSFSR and its own Charter, which is adopted by the General Meeting of the Academy of Sciences.

The Organizing Committee for the Drawing Up of the Draft of the Charter and the Principles of the Formation of the Initial Membership of the Russian Academy of Sciences, which was formed by a decree of the Presidium of the RSFSR Supreme Soviet, jointly with the commission, which was established by the General Meeting of the USSR Academy of Sciences, by 15 December 1991 is to formulate the procedure of the integration of the members of the USSR Academy of Sciences with the initial membership of the Russian Academy into the unified Russian Academy of Sciences. Here as a result of integration all the members of the USSR Academy of Sciences become members of the Russian Academy of Sciences, while retaining their titles of full members and corresponding members.

To establish that the Russian Academy of Sciences is the highest scientific institution of Russia, which is called upon to unite prominent scientists of Russia regardless of their departmental affiliation.

After the approval by the General Meeting of the Russian Academy of Sciences of its Charter to effect the transfer of the buildings, major scientific instruments, ships, scientific equipment, and other property, which at present is in the possession and use of institutions of the USSR Academy of Sciences, to the ownership of the Russian Academy of Sciences, with allowance for the maintenance of the conditions for the successful work of the Academies of Sciences of the sovereign republics.

2. The RSFSR Council of Ministers:

is to take steps to attach to the institutes, laboratories, enterprises, and organizations, which are subordinate at present to the USSR Academy of Sciences and are on the territory of the RSFSR, their buildings, fixed capital, and other property;

is to hand over the parcels of land, which are being used by institutions and organizations, which at present belong to the USSR Academy of Sciences and are on the territory of the RSFSR, to the Russian Academy of Sciences for permanent and free use.

is to prepare for submission to the RSFSR Supreme Soviet proposals on the exemption of scientific institutions and organizations from all types of taxes, duties, and tariffs, including on currency assets, which were obtained from foreign economic activity, with these channeling of these sums into the development of scientific activity and the training of highly skilled personnel, the strengthening of the material, technical, and social base;

is to ensure the inclusion in the republic order for state needs and the financing in 1992 and subsequent years of capital construction projects of the Russian Academy of Sciences, its regional departments, and scientific centers for scientific production purposes, apartment houses, children's preschool institutions, schools, facilities, and other facilities of the social sphere, with the coordination in necessary cases of the amounts of construction and installation work;

when drawing up the draft of the RSFSR budget for 1992 is to envisage the earmarking of allocations, including in foreign currency, for the financing of basic research, which is being conducted by institutions of the Russian Academy of Sciences in the amounts, which are necessary for its support, at a level not less than 1990 (in comparable prices);

is to prepare proposals on the increase of the social protection of personnel of the institutions, organizations, and enterprises of the Russian Academy of Sciences under the conditions of the transition to a market economy.

3. To take cognizance of the decision of the General Meeting of the USSR Academy of Sciences on the organization of an all-union academic structure. To give the necessary assistance in its organization and in its supply with material, technical, and other resources.

[Signed] RSFSR President B. Yeltsin

[POISK commentary] We read: "...to formulate the procedure of the integration of the members of the USSR Academy of Sciences with the initial membership of the Russian Academy into the unified Russian Academy of Sciences."

But the Russian Academy has not yet been born. And it is unknown what kind of child this will be: a normal one or a freak. And why do they invite the President to settle the affairs of the self-administered nonstate organization and to indicate which academy is to be integrated with whom?

Will they really not be able to look into it themselves?

Further: "To establish that the Russian Academy of Sciences is the highest scientific institution of Russia."

Until now we thought that the title "highest" was earned by scientific works. It turns out that it is possible to confer it by an ukase, moreover, before the birth of an institution.

Further: "and has within it institutes, laboratories, enterprises, and organizations." This is at variance with the concept, which was taken into consideration by the RSFSR Supreme Soviet and according to which there are no institutes within it. It would not be a bad idea to notify the parliament before changing the concept.

But all the foregoing verbal rubbish pales before the main point, for the sake of which this draft was kept secret: "After the approval by the General Meeting of the Russian Academy of Sciences of its Charter to effect the transfer of the buildings, major scientific instruments, ships, scientific equipment, and other property, which at present is in the possession and use of institutions of the USSR Academy of Sciences, to the ownership of the Russian Academy of Sciences, with allowance for the maintenance of the conditions for the successful work of the Academies of Sciences of the sovereign republics."

The aspiration of the new monster to own all and everything dims its eyes so much that it does not see the obvious discrepancy: There is no charter yet, but hand over the property! And not in parts, but all of it. Including the land: "...to hand over the parcels of land, which are being used by institutions and organizations, which at present belong to the USSR Academy of Sciences and are on the territory of the RSFSR, to the Russian Academy of Sciences for permanent and free use."

Only a little more than a year has passed since a similar point in the ukase of M. Gorbachev "On the Status of the USSR Academy of Sciences" was suspended by the RSFSR Supreme Soviet. Now they are inciting the President to the same kind of mistake. It only remains to make bets on how many days Tatarstan or Bashkortostan will need in order to suspend the effect of this point. And again science will be involved in politics.

Is it worth saying that given such an approach the people who create scientific results: the scientists, who work at institutes and do not have academic titles, prove to be alienated from the management of property? Their reaction is easy to predict. We remember the protest meetings against the ukase of M. Gorbachev.

The institute should belong to itself, while it should be financed from all possible sources, republic and state boundaries notwithstanding. That is precisely how they do it in civilized society.

Thus, at the most urgent moment, when well thought out joint actions are required for the saving of science, a document, which again drags out into the open all the inveterate contradictions, appears. The signing of the ukase is being postponed, the fate of institutes continues to be up in the air.

The ship is sinking. The crew is fighting desperately to save it. This time on the captain's bridge they are arguing about under what flag and in what rank it is to sink and to whom the ship belongs.

We clearly understand that, when discussing unpublished drafts, it is impolite to name their authors. However, the reader can probably guess from the depths of what department this painfully familiar text originated. At the same time I should say that the attempt of the department to present its draft in circumvention of the working group makes it necessary to make this draft public.

P.S. The working group under G. Burbulis has resumed its work. I hope that by the time of the publication of the article an acceptable text of the ukase will have been signed.

Kurchatov Officials Interviewed on Organizational Issues

927A0154A Moscow MOSKOVSKAYA PRAVDA
in Russian 11 Mar 92 pp 1, 2

[Interview with Doctor of Physical Mathematical Sciences S. Kh. Khakimov, deputy director for science of the Russian Kurchatov Institute Scientific Center, and Candidate of Physical Mathematical Sciences S. V. Antipov, assistant director of the Russian Kurchatov Institute Scientific Center, by MOSKOVSKAYA PRAVDA correspondent V. Yegikova, under the rubric "The Fate of Science"; date and place not given: "The Trajectory of the Kurchatov Star"—first eight paragraphs are MOSKOVSKAYA PRAVDA introduction]

[Text] Perhaps, one cannot remember whether there is in Moscow some institute, except the Kurchatov Institute, which has experienced so many changes in public perception. Moreover, their amplitude always fluctuated sharply—from total secrecy to an aura of glory, from complete indifference to sharp rejection, from unconcealed irritation to involuntary admiration. And once again indifference.

At one time they spoke about it in a whisper, and then only the initiated did. Hardly anyone clearly knew what the fence, which appeared in the early 1940's in one of the then still remote districts of the capital, concealed. Years would pass, and the story of the development of this Soviet atomic bomb would become surrounded by legends, the institute, which was founded by Igor Vasilyevich Kurchatov, would receive his name, while the words "nuclear icebreaker," "nuclear power plant," and "nuclear reactor" would become firmly established in our vocabulary.

They would become established at first with a plus sign, but then would be associated with a terrible disaster, with a catastrophe, and the vast grounds of the "Kurchatov" would begin to be perceived in mass consciousness as a gloomy symbol of it. This image, which is being duplicated by the "Greens," would give rise to unconcealed hostility with respect to the once idolized physicists. And here in all corners they would begin to talk about a new potential danger that is connected with them: Who, they say, will guarantee that the nuclear

physicists will not go and build bombs for all different kinds of Husayns and Qadhafis?

Behind this talk an event, which is of utmost importance not only for the Institute of Atomic Energy, but also for science in general, remained almost unnoticed: By an ukase of the president of Russia the Russian Kurchatov Institute Scientific Center is being established on the basis of this research collective. Such a document was signed by Yeltsin at the end of last year, while the intense study of the statute, on the basis of which the center will operate, is now under way. What is this, what is the purpose of its establishment, and why did they receive the presidential ukase at the Kurchatov Institute with such hope?

It was for answers to these questions that photo journalist Aleksandr Volodin and I set off for the region of old Khodynka, where an entire campus of the institute appeared. The photographs taken here will help the reader if only for a few moments to take a look beyond the gate of the "Kurchatov," for tours about its grounds for the present are not yet available to everyone. And the situation will hardly change in the foreseeable future: The institute remains strictly secret. And not only because it is protecting secrets, the covers were lifted from many of them after the famous Harwell report of I.V. Kurchatov in 1956. But a strict policy should ensure your security and mine!

To tell the truth, the small misunderstanding with the pass ordered in the name of the correspondents, which forced us to hang about for half an hour in the gate house, did not cause annoyance, as it probably would have in any other case. I even felt gratitude toward these strict young men, for whom my identification card was only a useless piece of cardboard. And involuntarily I caught myself thinking that I, sad to say, am not free from the very same phobia that for many people is firmly linked with the name of this research giant. It, this phobia, which took root in post-Chernobyl consciousness, also forced the administration to set up over the central entrance on Kurchatov Square an enormous display board which highlights the radiation background. The innovation should convince the passerby: Its level does not exceed the inherent, natural level. At the institute itself they are firmly convinced—the ecological situation in their microrayon is very nearly the most calm one in the entire city.

We saw another display board of the same kind on the grounds of the institute, where walks tightly surrounded by pine trees lead to various buildings and facilities. Here is one of them, which in appearance is in no way noteworthy—the entrance to the building where the very first reactor, which was built by Boroda, as they called Kurchatov behind his back, was developed. Since then much has changed at the institute. Nuclear power engineering, controlled thermonuclear fusion, which promises to give people the cheapest, safest source of power, medical, ecological research.... So the Institute of Atomic Energy is no longer just reactors.

Incidentally, it will give up the old name. Now this is the Russian Kurchatov Institute Scientific Center, and I ask Doctor of Physical Mathematical Sciences S.Kh. Khakimov, deputy director for scientific work, and Candidate of Physical Mathematical Sciences S.V. Antipov, assistant director, to tell what is behind the change of the sign. Here are a few episodes of the conversation that was recorded by the reporter's dictaphone:

[Khakimov] The goals of the establishment of the Russian Kurchatov Institute Scientific Center are formulated in the first lines of the presidential ukase. The implementation of state science and technology policy in the sphere of the development and assimilation of safe and ecologically clean methods of generating power, the creation of the necessary conditions for the evolution of the research and development, which are being conducted at the Institute of Atomic Energy, as well as the necessity of the more efficient use of the created scientific experimental base are spoken about here. So that not only is the institute being retained with all rights, but various enterprises, institutions, and organizations will become a part of the center that is being established on its basis. We have not yet had an analog of such a scientific research association.

[Yegikova] But does this not resemble a sort of concern or corporation?

[Antipov] By no means. We arrived at the establishment of the Russian Scientific Center as a result of natural evolution. At one time the Kurchatov Institute was established for the solution of a precise applied problem, and at that time it was entirely logical that it was included in the system of the Ministry of Medium Machine Building and then in the system of the Ministry of Atomic Power and Industry. But gradually basic research began to take up a larger and larger share in the problems of the institute, the institute began to gravitate more and more toward the Academy of Sciences. And first of all this cannot allow us to shut ourselves up within a concern or corporation. At the same time basic science at our institute has a special nature, it, as a rule, has a high resource intensiveness, is being developed on the basis of a powerful experimental base, and in perspective is aimed at a practical result. Here the scientist and researcher have every opportunity to travel the entire chain from theoretical and basic work to exploratory and applied work, up to the development of the latest technologies and the materialization of an idea in finished items.

[Khakimov] Precisely this characteristic does not allow us to join the academy. I will say if only that we have fixed capital worth a billion in old prices—the entire academy has approximately the same amount! Having joined the academy, we could, roughly speaking, either "sink" it or create just another monopoly. Thus, when the question of the fate of the Ministry of Atomic Power and Industry arose, we also had to ponder our own fate. Our version in many respects is a unique one. And the uniqueness lies first of all in the fact that a certain

formation, which is neither a ministry nor an enterprise, is being established at the level of state administration....

[Yegikova] In other words, are you obtaining what every institute dreams of—complete independence?

[Khakimov] Do you see, I want to focus attention once more on the word "unique." Because each institute, like a star, has its own fate, its own trajectory. It is a matter not simply of independence, but of the establishment of a national center. It turned out that much wealth is concentrated at the Kurchatov Institute. This is first of all the human potential, the largest scientific forces. Second, a large research and experimental base—lasers, accelerators, tokamaks, reactors. All this is enabling us today to go into the trajectory (if we use the same image), which not everyone is destined to travel.

[Yegikova] And the institute was able to concentrate such wealth to a significant extent owing to the substantial financing which the Ministry of Medium Machine Building and then the Ministry of Atomic Power and Industry allocated. How will your budget now be formed?

[Khakimov] First, in the presidential ukase the questions of the support of the center are specially stipulated. This is first of all state financing. But, of course, we will not be able to rely only on it. And, besides, there is not such possibility today, when we see how hard it is for the state to hold out on a deficit-free budget, under these conditions even the meager assets, which are intended for science, will most likely be reduced.... We believe that a portion of the financing will be provided owing to participation in competitive scientific programs. We will earn money by concluding direct contracts with clients for the conducting of applied research. Finally, we also provided for structures of a commercial nature.

[Antipov] And the relationship of all these sources of revenue should be such that the center would serve its purpose. If a portion of the assets for its research are allocated from the state budget, in other words, the money of taxpayers, they always have the right to ask us how these assets are being spent. And the higher the level of the work being performed here is, the more chances there are to win the competition and to conclude profitable contracts. So that we will form our fate ourselves.

[Yegikova] It is no secret that the attitude toward nuclear physicists in society is complex. Does the psychological discomfort, which is connected with this, not interfere with work?

[Khakimov] I would not talk about some psychological discomfort. Experienced people, who are devoted to the matter, people, who understand how important and necessary their work is, work at the Kurchatov. After all, the same research reactors, the removal of which from Moscow is constantly being discussed, are needed for the assurance of the safety of the reactors that are operating at nuclear power plants. To dismantle our installations

without a precise program of relocation means not to free ourselves of the danger, but to bring it closer. I am not saying that such an unprepared shutdown of a reactor will deprive tens of cardiological, oncological and other clinics of a serious diagnostic base. This is only a part of what is being done at the institute. Preparation for gradual removal is another matter, but here a program is needed, assets are needed.

If we talk about what persistent watchfulness toward nuclear physicists can turn into, it is postponed danger. I repeat: Today the most experienced people work here, but who will come tomorrow? This is where we see the main trouble—this is the collapse of the higher school. Its situation today is so disastrous, the prestige of knowledge and higher education is falling so low that with each year the influx of fresh forces, talented young people is decreasing. Although we are also striving to support the closest contacts with higher educational institutions, are directing, feeding up, and helping young people, yet.... Today this comes with much difficulty. Among young people there are, of course, people who are in love with science, but many, very many are leaving for a sphere, which is more prestigious today and more highly paid. Tomorrow nuclear power engineering may find itself in the hands of mediocre specialists—this is the real danger!

[Yegikova] Let us add to this that scientists are leaving....

[Antipov] They are leaving.... For practical training, for work under short-term contracts. But such a problem exists, you are correct, although the fuss, which has been raised over the all but mass exodus of physicists for countries of the East, is more of a propaganda nature. The gossip is being stirred up most likely by that part of society, which does not want to resign itself to the loss of the former might. They are also playing into the hands of some countries, which would like in this way to entice specialists.

It is another matter that the scientist has the right to have every opportunity for a full-fledged job and it should be properly paid for. It is then that, in particular, it is possible to be certain both that young people will come to us and that the "suitcase" theme will come to an end....

[Yegikova] Can you expect that the establishment of a national center will help in this? As far as I know, the new minister, who is responsible for state science and technology policy, likes to repeat: If there is no chance to give people money, it is necessary to give them freedom.

[Khakimov] A good formula. The program, which is now being drawn up to execute the presidential ukase, in many respects relies on it. If we succeed in complying with it, there will be success. Will we be able to use freedom intelligently? We will meet at the national center after a while—at that time there will also be an answer to this question. But for the time being it is necessary to work!

Shorin Interviewed on Price Deregulation's Effect on S&T Budget

927A0155A Moscow POISK in Russian
No 11 (149), 7-13 Mar 92 p 1

[Interview with Vladimir Shorin, chairman of the Committee for Science and Public Education of the Supreme Soviet of the Russian Federation, by POISK correspondent Yelizaveta Ponarina, under the rubric "What Is Science To Be Like?"; date and place not given: "By the Will of the Ministry of Finance the President of Russia Is Proving To Be Not the Master of His Words"—first three paragraphs are POISK introduction]

[Text] A parliamentary hearing on the problems of science and education during the period of the liberalization of prices was held during the first half of February. Its result was the appeal of State Secretary of the Russian Federation Gennadiy Burbulis to the government and the Supreme Soviet with the instructions to examine the principles and technology of the budgetary distribution of assets for science and education; to establish promptly groups of professionals, which could suggest experience of the formation of nonbudgetary accumulations for science, would find the legal protection of sponsorship, and would correct the forms and rates of taxes, which are used in the sphere of science and education.

It was decided within 10 days to examine this problem from all angles, to discuss it in the government and the Supreme Soviet, and to make a collective decision.

A month passed, no directive documents were published, and at that time our correspondent Yelizaveta Ponarina addressed to Vladimir Shorin, chairman of the Committee for Science and Public Education of the Supreme Soviet of the Russian Federation, the request to comment on the course of events.

[Shorin] Practically nothing of what was planned had been done. Although on the day of the parliamentary hearings a portion of the documents had been prepared. There is even a draft of the Ukase of the president "On Urgent Steps on the Preservation of the Scientific and Technical Potential of Russia." Note—urgent. But the draft to this day is "moving" somewhere through the labyrinths of power, while science is falling to pieces before our eyes.... I was personally convinced of this, having visited the Academy Campus of Novosibirsk. People have been forced to leave scientific research institutes, because for several months they have not been receiving their wage there.

[Ponarina] How is that? I remember that at the general meeting of the Russian Academy of Sciences Boris Yeltsin gave solemn assurances that financing would be maintained at the 1991 level with allowance for inflation....

[Shorin] Yes, there were solemn assurances to give 77 billion in prices of January 1991 for science and education of Russia. However, the Ministry of Finance (First

Deputy Minister V. Barchuk) does not intend to take into consideration either the decision of the Supreme Soviet of Russia—the budget director—or the president's word. Instead of 77 billion (and they asked for and should have been given 86 billion) 52 billion will be given for the year. During the first quarter they gave only 10 billion. People endured, waited, hoped that during the second quarter they would make adjustments.... Alas, the Ministry of Finance believes that for the second quarter 10 billion will be sufficient. That is, all the norms and laws are being violated. I consider this the deliberate murdering of science, sabotage with respect to the state and its future.

[Ponarina] What do you intend to do in connection with this?

[Shorin] A conference was held the other day with First Deputy Chairman of the Supreme Soviet Sergey Filatov. Vladimir Ispravnikov, chairman of the Supreme Economic Council of the Russian Federation, Aleksandr Pochinok, chairman of the Commission for the Budget, Plans, Taxes, and Prices of the Supreme Soviet of the Russian Federation, and First Deputy Minister of Science, the Higher School, and Technical Policy Valeriy Mikhaylov also attended it. They drew up a protocol with the demand to provide the promised financing. If this also does not work, it literally remains for us to grab posters and take to the streets in protest.

It is surprising that some functionaries do not understand obvious things. If, for example, because of the lack of feed in the country cattle will have to be slaughtered, this is bad, but it is possible to acquire a new herd from abroad. But if the bankruptcy of science occurs and scientific schools disintegrate, this will doom the state to vegetation. No country yet has recovered and achieved political and economic independence without science, education, and the latest technologies. Pardon me, but they understood this even in 1918, when they opened new scientific institutes.

[Ponarina] Does it turn out that the need for knowledge and culture was greater?

[Shorin] It is difficult for me to judge the need for culture of the present members of the government. If only because I am unable to make myself heard to them, in contrast to the former members of the cabinet. The government has become practically inaccessible for contact....

[Ponarina] Thus, is it no use to expect anything good for the development of science in the immediate legislative acts?

[Shorin] No, there is movement. Both in the draft of the ukase of the president and in the legislative initiatives

that are being offered by our committee. They concern first of all the right to earn money for science, if our budget is that puny.

For example, it is proposed to exempt from the value-added tax the research and development, which are performed under contracts with clients and are financed from assets of the republic budget and nonbudgetary funds of the Russian Federation. That is, to eliminate the now existing absurdity, when money is allocated to the Academy of Sciences from the budget and again from the budget to another scientific research institute. They conclude between themselves a contract for the performance of the work, while they take from their budget financing the value-added tax.

Or another example of legislative initiative: "To make tax-exempt the portion of the profit of associations, enterprises, and organizations, which is channeled into research and development and the devising of scientific equipment, as well as into the Russian basic research fund, the Russian technological development fund, and the retirement insurance fund of workers of science, but not more than 20 percent of the taxable profit."

[Ponarina] That is, in reality, is this the first timid attempt to promote sponsorship?

[Shorin] In general, yes. But there was another good decision which, in my opinion, for many production workers went unnoticed. This is the decree of the government on the mandatory channeling into the scientific and technical development fund of 1.5 percent of the value of the produced output. At concerns and associations it is even permitted to include these amounts in the product cost. There is the hope that as a result of this sectorial and technological science will begin to recover. Of course, the fund is turning out to be somewhat "spread" about the country, but 10 percent of this 1.5 percent should be transferred to the centralized federal fund....

[Ponarina] Earlier, when you uttered the word "should," it breathed of the irreversibility of what has been done, now there is not a trace of this.

[Shorin] If today bureaucrats correct the presidential promises as they wish, it is actually impossible to count on this. But in such a case it is necessary to rely on the common sense of every manager, every executive. Since, I will repeat once more, the economy and production will not have a future without science.

Brewing Conflict Between Science, Finance Ministries

927A0167A Moscow RADIKAL in Russian
No 10, Mar 92 p 10

[Commentary by Marina Lapina on "Remarks on the Draft of the Ukase of the President of the Russian Federation 'On the Necessary Steps on the Preservation of the Scientific and Technical Potential of Russia'" of

the Ministry of Finance of the Russian Federation, under the rubric "A Document With Commentary": "There Is No Money for Science. And It is Unknown..."]

[Text] The marathon of nearly half a year on the preparation of the vitally important ukase of the president "On the Necessary Steps on the Preservation of the Scientific and Technical Potential of Russia," about the necessity of the appearance of which the president himself and executives of the Supreme Soviet and the Government of Russia spoke so often, will, apparently, soon end. Moreover, very sadly.

In the last issue of RADIKAL we told about the final discussion of the last version of the draft, which took place in the Ministry of Economics of the Russian Federation. Its results did not give grounds for optimism. At the end of last week the worst fears were confirmed. The Ministry of Finance sent to the government its official conclusion signed by Deputy Minister I. Molchanov. The financial department, which is headed by Ye. Gaydar, considered as inexpedient practically all the steps proposed by the Ministry of Science. Inasmuch as it is possible with a great degree of likelihood to consider the point of view of the Ministry of Finance to be final and to identify it with the point of view of the government as a whole, we consider it necessary to cite the document in full. Objections to nearly all the points of the draft of the ukase are presented in it.

The first—most fundamental—one proposed the maintenance of the spending on science at the 1991 level. B. Yeltsin repeatedly gave assurances of the observance of this indispensable condition. In fact the Ministry of Finance is talking about cutting the state budget for science by nearly a third of the planned budget, although in the presented document specific figures are not cited.

The next point concerns the notorious Basic Research Fund. Then the formation of the nonbudgetary Russian Technological Development Fund for the financing of interbranch scientific and technical programs and projects is discussed. The fourth point concerns the preferential taxation of associations, enterprises, and organizations, a portion of the profit of which is spent on science. The objections on the next two points do not leave doubts with regard to their content.

Remarks on the Draft of the Ukase of the President of the Russian Federation "On the Necessary Steps on the Preservation of the Scientific and Technical Potential of Russia"

GOVERNMENT ASSIGNMENT NO. ASH-18-07625
OF 27 FEBRUARY 1992

The Ministry of Finance of the Russian Federation has examined the draft of the Ukase of the President of the Russian Federation "On the Necessary Steps on the Preservation of the Scientific and Technical Potential of Russia" and reports the following remarks and suggestions.

On Point 1.

The spending on research and development in 1992 will be determined in accordance with the general budgetary and financial policy of the state, in connection with which this point should be eliminated.

It is expedient, in the opinion of the Ministry, to eliminate Point 2 from the draft of the Ukase, since at present it is inexpedient to divide up among individual funds the assets that are being allocated by the state for the financing of science. Moreover, the establishment of the Fund will require the additional attraction of state assets for its maintenance.

Point 3 should be eliminated from the draft of the Ukase, since the amount and the procedure of the transfer of assets to this Fund are stipulated by "The Procedure of the Formation and Use of Nonbudgetary Funds of the Financing of General Sectorial and Intersectorial Research and Development and Measures on the Assimilation of New Types of Products," which was approved by the Ministry of Science, the Higher School, and Technical Policy, the Ministry of Economics and Finance, and the State Tax Service of the Russian Federation of 29 January 1992, No. SK5-1/8.

On Point 4.

Prevailing legislation already stipulates several privileges for scientific organizations. Thus, the Law of the Russian Federation "On the Value-Added Tax" exempts from this tax the research and development, which are performed at the expense of the state budget, while in accordance with the Law "On the Tax on the Profit of Enterprises and Organizations" this tax is collected only from the business activity of scientific organizations.

Considering the most serious economic state of the country and the difficulties with the formation of the state budget, the Ministry regards as premature the granting of additional privileges to enterprises, institutions, and organizations.

In connection with what has been stated Point 4 should be eliminated.

On Point 5.

The application as of 2 January 1992 of regulated state fares for transportation services for the population, including fares for the travel of passengers by air and rail transport in international service, was established by Ukase No 297 of the President of Russia "On Steps on the Deregulation of Prices" of 3 December 1991.

The reduction of these fares by 75 percent for personnel of scientific institutions and higher educational institutions, who are being sent abroad on missions, would decrease the revenue base of transportation enterprises and the possibility of their production and social development under the conditions of the transition to market relations and would create the need to reimburse rail and

air transport enterprises for the losses of revenues from the budget, in connection with which Point 5 is also subject to elimination.

On Point 6.

The Ministry does not have objections to the material support of young talented scientists. However, this measure should be carried out within the limits of the allocations, which are envisaged by the Ministry of Science, the Higher School, and Technical Policy of the Russian Federation for the conducting of scientific research, and on the condition of the establishment by the Government of the number of stipend recipients and the amounts of the stipends being paid. For these purposes it is necessary to commission the Ministry of Science, the Higher School, and Technical Policy of the Russian Federation jointly with the scientific community to submit the corresponding proposals to the Government on this question. In connection with the foregoing it seems expedient to make the corresponding changes in the wording of this point.

On Point 7.

At present the credits, which are being granted by foreign states to our country, are being allocated for the stabilization of the rate of exchange of the ruble and purchases of essential goods for the population, in connection with which we consider this proposal premature.

[Signed] Deputy Minister I.P. Molchanov

It is quite obvious that if these remarks remain in force, it is possible to give up for lost the ukase of the president, the appearance of which science is waiting for impatiently. In such a situation the complaints that the best minds one after another are leaving the country, seem at least like craftiness, the concern about the fate of science seems affected, while the promises to support it seem populist in the very worst meaning of this word. Such a conclusion suggests itself after becoming familiar with the document that came from the depths of the Ministry of Finance of Russia. Therefore, RADIKAL asks the executives of the Ministry of Finance to explain their position on this question, since they have assumed responsibility for the fate of Russian Science.

Velikhov, Clark Interviewed on Aid to CIS Nuclear Scientists

Velikhov Interview

927A0163A Moscow RADIKAL in Russian
No 7, Feb 92 pp 9, 10

[Report by Vladimir Pokrovskiy on press conference of Academician Yevgeniy Pavlovich Velikhov in the Presidium of the Russian Academy of Sciences under the rubric "Two Interviews on One Theme"; date not given: "The Dollar Rain Over Our Nuclear Scientists"—first two paragraphs are RADIKAL introduction]

[Text] American "gumpom" [humanitarian aid] has also reached our scientists. Boris Yeltsin and U.S. Secretary of State James Baker announced the establishment of the Center for the Support of Nuclear Scientists (the International Nuclear Center). The American side to start with is allocating \$25 million.

The financial support of the program of the center is comparable to the budget of all Russian science. What will the new center be? On what will the money be spent? Who specifically will distribute it? These and a large number of other questions were the main theme of the press conference of Yevgeniy Velikhov in the presidium of the Russian Academy of Sciences.

Yevgeniy Velikhov: "This Will Not Be a House for Aged Scientists...."

For the present it is too early to say anything specific about the International Nuclear Center. Specialists in Washington and Moscow are still just working out the details, but this, I hope, will not take much time. It is proposed to convene any day now in Bonn a conference with the participation of the Russian side. The constituent conference is planned for the middle of April—at it they will specify everything.

But something is already clear now. For example, the location of the center—Troitsk.

To the questions of journalists why namely Troitsk, and not, say, Moscow, Academician Velikhov replied that, first, in Moscow there is much difficulty with premises and, second, such was the wish of the American side—to locate the center not in Moscow, by somewhere close by. Troitsk is a scientific center, where there are possibilities for the receiving and residence of foreign specialists (premises, service, communications, a secondary school, and so forth).

"I believe that the emphasis on this question is connected with some confusion," Yevgeniy Pavlovich noted. "It is incorrect to think that since the center is in Troitsk, all the dollars will also go there. We are establishing not a scientific center in the understanding, to which we have become accustomed, and not some new institute, but a structure like a science foundation. Thus far it has not been completely decided precisely how it will be managed. However, it is clear that the international board of directors will determine its overall policy. For the discussion of received proposals, as usual, we will set up expert groups—moreover, the proposals can come both from institutes and from individual scientists, to whom grants will be allocated in case of a favorable decision.

"The idea of the center, generally speaking, is expressed rather clearly in the announcement itself. It is being established to support scientists, who were involved in the development of nuclear weapons, and subsequently generally everyone, who worked for 'defense'—chemical weapons, bacteriological weapons, delivery vehicles,

missiles, and so forth—but now due to the reduction of military orders have found themselves unemployed.

"While working on the programs of the center, they will engage exclusively in peaceful research. The list of such programs is open, it will, undoubtedly, be supplemented all the time. But what is set down in the announcement is for scientists a broad sphere of activity. We have here new sources of energy, environmental protection, questions of the transition to a market—in short, a large number of opportunities."

Yevgeniy Velikhov particularly emphasized that this will not be a home for aged scientists. "The center," he said, "is intended for talented scientists, for those whose research will be able to repay the invested dollars and, moreover, to guarantee investors a profit. It is anticipated that not only states, but also private firms will display interest in the center. Accordingly, their rights to the scientific and technological results will also be organized."

To the question, to whom specifically do they propose to give the first grants, Velikhov replied that the first addresses have already been tentatively stipulated: Within Russia these are the two very large scientific centers in Arzamas and Chelyabinsk. Talks with the other states of the CIS [Commonwealth of Independent States], mainly with Ukraine and Kazakhstan, are next. In Ukraine there are scientists who dealt with ballistic missiles, while in Kazakhstan there is the regrettably well-known, still recently supersecret city of Kurchatov near the Semipalatinsk Test Range. The specialists there tested nuclear weapons.

Near the end Yevgeniy Pavlovich was asked a rather tricky question—Is there not an element of contrivance in the problem of the protection of scientists who possess military secrets? After all, today they will not very likely let such a scientist go abroad. Velikhov believes that the problem is really serious.

"Of course," he said, "the departure of such scientists involves the safeguarding of knowledge, the dissemination of which, according to international understandings, we are obliged to restrict. But the laws are substantially more liberal now than before, and a person who wishes to leave can always find such an opportunity. Moreover, this problem is not a new one. Many scientists, who worked in the 'towns,' left them long ago and settled at academic institutes—for their departure it is a problem only of finances...."

Clark Interview

927A0163B Moscow RADIKAL in Russian
No 7, Feb 92 pp 9, 10

[Interview with Robert Clark, science attache of the American Embassy, by Vladimir Pokrovskiy under the rubric "Two Interviews on One Theme"; date not given: "The Dollar Rain Over Our Nuclear Scientists"—first paragraph is RADIKAL introduction]

[Text] Robert Clark, science attache of the American Embassy, appraises less dramatically, but by no means frivolously the threat of the spread of Soviet military secrets to Third World countries. A few days ago Pokrovskiy spoke with him at the editorial office of RADIKAL.

Robert Clark: "Aid to Russian Science Is in the Sphere of Vital Interests of the United States"

[Clark] Now this is not too serious a threat, he said. But who knows how the situation will take shape in your country in half a year? Moreover, such apprehensions are not at all the main reason for the appearance of the idea of such a center. We simply want to help you get on your feet.

[Pokrovskiy] Why was the establishment of the International Center announced at such a high level? Did Baker and Yeltsin really not have more important themes for discussion?

[Clark] It is simply that this actually is a very serious and major program. The aid to science of the countries of the CIS is a part of a more extensive program, just as aid in drugs and foodstuffs. But this is a very important part. It is noteworthy that our Secretary of State Baker announced the establishment of the center. This signifies: The American Government wants to give the idea of the center a good initial boost.

[Pokrovskiy] Who specifically is the author of this idea?

[Clark] Every good idea usually has many fathers. I would not want to name names here. The idea had been about for a long time and was talked over for a long time both in Russia and in the United States. A number of official and semi-official proposals were made on your part. In his day Gensher voiced similar ideas. This question was also discussed at a meeting of Presidents Yeltsin and Bush at Camp David. We are very interested in helping Russia to preserve its scientific potential.

[Pokrovskiy] \$25 million—is this a lot or toll little for the effective support of our nuclear scientists?

[Clark] I do not know. We have not made scientific analysis and forecasts. This is merely the first step.

In the immediate future other countries will also subscribe to the program. Germany has announced this, Japan and the European Community have displayed much interest in the center. Now it is still too early to talk about any specific amounts, but there is reason to believe that their contributions will be comparable to ours.

[Pokrovskiy] The opinion that the not too convincing victory of Bush in the primary marathon in New Hampshire may affect the amount of American aid was recently published here. Can this affect the fate of the center? In general, does the program of assistance to scientists depend on the outcome of the next presidential election?

[Clark] If it does, I believe that it is only to a small degree. We will in any case help Russia to get through the difficult times. Regardless of the personality of the president aid to Russian science is in the sphere of vital interests of the United States and, therefore, will on no account be suspended.

([Pokrovskiy] Incidentally, in responding to the same question, Yevgeniy Velikhov was more categorical. As he reported, the \$25 million, which were allocated for the International Nuclear Center, will be taken from the budget of the U.S. Department of Defense, namely from the \$400 million, which congress allotted for operations on the nonproliferation of weapons of mass destruction. In other words, this money had already been allocated by congress and no longer can be anyone's trump card in the primary battle.)

[Clark] Interpreting the concept "vital interests," Robert Clark said:

We are interested in having your society become civilized. This means a market, democracy, economic reforms. For the present you are at the very beginning of the path. For the present the situation in your country is abnormal. If only the well-known incident with the dispersal of the "right-wing" rally testifies to this. We are carefully watching events in Russia, we understand well the alignment of forces, who is "for" and who is "opposed." In the future the most different incidents, the most different complications, which influence the temperature of the relations between our country, may occur, but, I believe, the overall trend will hardly change. And it is possible to define it with one word—cooperation.

South American Countries Seek East European, CIS Specialists

927A0150A Moscow KRASNAYA ZVEZDA in Russian
14 Mar 92 p 5

[Article by ITAR-TASS correspondent Valeriy Zadko:
"Are They Waiting for Us in South America?"]

[Text] This story began at the end of last year, when a delegation of the European Commission visited a small South American country—Uruguay. Behind closed doors it discussed with the Uruguayan leadership the possibility of sending to Uruguay a portion of the flow of emigrants from the CIS [Commonwealth of Independent States] and the Baltic countries, which, according to the data of the commission, will increase sharply in 1993. Here the envoys of the European Commission gave the Uruguayan authorities to clearly understand that the West intends to finance the fixing up of the families of immigrants, who come to Uruguay.

In spite of the private nature of the talks, which were most likely the "sounding out" of the ground by the West European states, which fear an enormous wave of refugees to their countries, they became known both to journalists and to political figures of other South American countries. In January of this year Argentine President Carlos Menem, who addressed a conference on questions of providing aid to the countries of the CIS, which was held in Washington, proposed to accept in Argentina from 100,000 to 300,000 immigrants from the states of the former Soviet Union. While addressing the European Parliament, C. Menem indicated the "urgent necessity of joint actions for the solution of one of the greatest dramas of the 20th century—the exodus from poor countries to wealthy or simply less poor countries." Initially the Argentine president requested for the setting up of immigrants in his country up to \$100,000 per family. Subsequently this figure was reduced to \$25,000.

In the opinion of Latin American specialists, the most realistic and long-range plans on the attraction of immigrants from the countries of Eastern Europe have been drawn up in Venezuela. They are due in many respects to the program of the state petroleum company, which will take six years and is calculated at \$48 billion. In connection with this program an acute shortage of manpower, which it is planned to "liquidate" by the expansion of emigration, threatens Venezuela in the immediate future. "We need 250 chemical engineers a year, but our universities train only 40 specialists a year," Freddi Rojas, chairman of the Federation of Chambers and Associations of Commerce and Industry of Venezuela, told journalists.

In February the government of this country planned to allocate annually about \$25 million for the financing of a program on the selection of highly skilled manpower from the countries of Eastern Europe and the CIS. These assets include payment of the fare to Venezuela, the drawing up of documents, as well as the taking of accelerated Spanish courses. Each immigrant will have

to pledge to work in the country no less than two years. Ad hoc commissions for the selection of immigrants for work in industry (the petroleum industry) and agriculture, as well as instructors at higher educational institutions and technical schools have been set up under the president and in the congress.

The present situation in the former USSR may be advantageous for Brazil, the Brazilian GAZETA MERCANTIL wrote. The Brazilian Government is now considering in a hurry a program of the attraction of "scholarly minds" from the countries of Eastern Europe. The Ministry of Foreign Affairs of Brazil reported in January that in the immediate future the government intends to specify how the selection of candidates for work at scientific centers of the country will be carried out. In all Brazilian authorities have proposed to admit up to 100,000 immigrants from East European states, provided the countries of Western Europe and the United States will consent to the financing of their setting up.

The governments of Paraguay, Bolivia, and Chile have also expressed the desire to accept on their territory people leaving the states of the CIS, the Baltic region, and Central Europe. In Santiago the question of the possible approval of amendments to the rather strict immigration law will be considered in May of this year. In turn, Paraguayan authorities have repeatedly stated that the country urgently needs highly skilled personnel. There they remember how in the middle of the 1930's immigrant specialists from tsarist Russia, first of all servicemen, gave substantial assistance to Paraguay in the formation of national engineering personnel. With the help of Prince Tumanov, Generals Belyayev and Ern, and Colonel Ekshteyn-Dmitriyev the artillery school in Asuncion was established and the engineering faculty at the University of San Lorenzo was founded.

Citizens of the countries of the CIS, who all the same decide to pack their bags and leave for distant South America, should clearly visualize: Are they actually waiting for them there? It is most likely that, with the exception of Venezuela and Brazil, which now need engineers of a number of specialties and highly skilled workers, practically all the other states of this region can offer the setting up of only agricultural workers. Such states as Argentina, Chile, and Paraguay need to develop the territories of the pampas, which at present are sparsely populated, and it is not ruled out that immigrants from the countries of Eastern Europe will be sent precisely there.

In Argentina and Chile, where the agrarian question is not urgent, immigrants can receive from the state plots of land in the southern regions that are near the Antarctic. Especially as their governments are hoping to settle and develop these lands with peoples who are "resistant" to the severe winters, that is, Russians, Ukrainians, Belorussians, and people from the Baltic region. At the same time in Paraguay and Bolivia, where

agrarian reform was actually not carried out, the arrival of immigrants may result in the active rejection of the local population.

Difficulties also await immigrants, who will succeed in finding a job under contract in the large cities of Argentina, Chile, Brazil, and Venezuela. The authorities of these states are regarding the wave of East European immigration more and more often as a counterbalance to the increasing influx of immigrants from Asia and the Middle East. Nevertheless, they will hardly be able to check the discontent of the local population, which, undoubtedly, will be offended by the fact that workplaces "are being taken away by force" from it.

One of the major problems for specialists with a higher education, who intend to leave for Chile, will be the recognition of their diplomas and skills. In this country foreign diplomas are thus far not recognized, while in the case of hiring at state institutions preference is given to local specialists or to citizens "naturalized" in the country. Moreover, in order to obtain a residence permit, it is necessary to live in the country not less than two years and to go through all the bureaucratic red tape on the registration of passports.

It seems, however, that the difference in the psychology of inhabitants of Latin America and Europe will be the main complicating factor. Immigrants will need not only to have a minimum knowledge of Spanish, but also to adapt to the conditions of fierce market competition. Moreover, it will be necessary to do this very quickly, since the "resettlement" allowance in the amount of \$20,000-25,000 per family will hardly be enough for more than a year. The rent for very modest housing will cost an immigrant \$400-600 (depending on the country) a month, more than \$100 will be spent on utilities and transportation, another \$100-800 will be spent on the education of one's children in kindergarten or school, and \$300-500 will be spent on a normal diet. Here it is necessary to take into account that many countries (the Uruguayan Government has already stated this) will require immigrants to repay in due time the resettlement allowances that were given to them.

In any case, even if citizens of the countries of the CIS are prepared to endure all the difficulties and deprivations, it is still too early to pack one's bags for the trip to Latin America. The problem, to all appearances, is not only one of money for setting up, which the European Community obviously is in no hurry either to pay or even to promise. In the countries of Western Europe for the time being they do not yet feel a real danger of the invasion of refugees from the "Communist East" and are worried more by the problem of the sharp increase of immigration from Middle East, Arab, and African countries.

Russian Biologists Find Jobs in West, Japan

927A0146C Moscow KRASNAYA ZVEZDA in Russian
13 Mar 92 p 1

[Article under the rubric "By a Telegraphic Line": "Scientists Are Leaving Us. With Whom Will We Ourselves Be Left?"]

[Text] About 40 highly skilled scientists, who left the Institute of Cytology and Genetics for work under contracts abroad, are conducting research at laboratories of Sweden, France, the United States, Canada, Japan, the FRG, and a number of other countries. "Contracts have not been concluded with scientific centers of the countries of the Middle East, where the danger of involving our researchers without their knowledge in the development of biological weapons may be real," reported Academician Vladimir Shumnyy, director of the Institute of Cytology and Genetics of the Siberian Department of the Russian Academy of Sciences.

Historical Basis of 'Brain Drain' Reviewed

927A0157A Moscow POISK in Russian
No 11 (149), 7-13 Mar 92 p 3

[Article by Aleksandra Mukhina under the rubric "Point of View": "A New Odyssey?"]

[Text] It is impossible to call the "brain drain" new for Russia. Ivan the Terrible sent 18 gifted youths to Europe to study, believing that subsequently they would make a significant contribution to the development of Russian science. And what of it? None of the people sent by the sovereign to study returned.

Scientists also migrated in the Middle Ages—history knows many vivid examples of the success of talented people in foreign lands. But the term "brain drain" appeared only in the sixties of our century, when the question of the emigration of English specialists to America, which paid generously for the labor of foreigners, arose. In the 1960's and 1970's in the West they regarded the "brain drain" as a natural process. But then in the late 1970's they began to talk about the damage connected with the mass departure of intellectuals for Canada, the United States, and even Great Britain. This damage was estimated at \$50 billion. (Today, by the way, it is believed that we lose about \$300,000 on the departure of one specialist.)

In the 1980's the developed countries finally became convinced that the "brain drain" for them is extremely disadvantageous—let us take if only the problem of chronic unemployment among emigrants and the expenditures on benefits. The FRG, for example, began to elaborate measures on re-emigration—it gave assistance in the establishment of small enterprises in their homeland to Turks, who today make up about half of the foreign residents of Germany. In our country as of late specialists have been discussing the advantages of what is called "checkerboard migration," when a scientist

lives abroad half a year, then returns to his homeland, but goes on vacation, for example, to Hawaii....

In the 1920's there was also nothing to eat in the country, but it was considered self-evident that the dogs of Pavlov should eat meat. True, here it was overlooked that meat also did not hinder the scientific associates who worked with Pavlov. This "absent-mindedness" dragged on for decades. If today you look at the faces of "juniors" and "seniors" on payday, it will be easy to guess the reason for their discontent: A scientific associate lives now, perhaps, much worse than Pavlov's dogs. At any rate, at many scientific research institutes people have ceased to go to the dining room and bring from home more than frugal sandwiches. What kind of science is it, if the wage is not enough for dinner in a public dining establishment?

Nevertheless, if you believe the results of surveys, everyday disorders among the reasons for going abroad hold sixth to 12th place. This means that there are problems that are far more significant for intellectuals than the starvation wage. In the opinion of Academician Nikita Moiseyev, "it is possible to endure hunger, but the sense of one's own uselessness—never...."

A year and a half ago the RSFSR State Committee for Science and the Higher School received from the Council of Ministers of the Union and the State Committee for Science and Technology the assignment to elaborate a set of steps on the prevention of the "brain drain" from the country and to prepare the corresponding package of documents and long-range programs. Today the representatives of the Ministry of Science, the Higher School, and Technical Policy are talking no longer about the prevention of the drain, but about the regulation of migration and the moderation of the consequences of scientists going abroad. Of course, they do not grudge any money for the saving of science. But.... At an international conference on this theme the following viewpoint was also heard: "We often hear: One must not allow the scientific potential to disintegrate. But we lived during the times of monsters. The army, the KGB, the CPSU, and science were them. In a liberalized civilian society science cannot be a monster. Moreover, a country of such a level of industrial development is incapable of supporting such science."

This year according to the forecast of the Ministry of Labor 2.5 million people will be dismissed from the sphere of scientific activity. (Today we have about 5 million scientists.) So what is better—if our candidates and doctors would become masseuses and peddle beer rather than going abroad and continuing creative work there? If in reality the forecast of the above-named ministry comes true, Teilhard de Chardin, it appears, was a prophet when talking about strikes in the area of the noosphere and about the unemployed and, perhaps, crazed intelligentsia. It will hardly be possible to transfer a large portion of the scientists, who have lost their job, to small science-intensive enterprises. Thus, indeed, the only solution for many people is to leave. Only specific institutes suffer from it. The state, perhaps, is losing

something today, but tomorrow, when it creates normal conditions of existence for scientists and is able to hire those who have returned and to give them work, it will only win. The Korean and Chinese experience of "flights with return" demonstrated this convincingly. There many scientists behave truly like Odysseus, who, no matter to what ladies he made advances, invariably returned to his Penelope.

The West today is prepared to lend us a helping hand, inasmuch as it is worried about the "drain of Russian brains" to countries with aggressive regimes. It is no secret that the intellectual elite in our country worked mainly for the military-industrial complex. Practically all technical higher educational institutions served "defense," but "fed" philologists, inasmuch as it simultaneously prepared them for the role of military translators. Who in our country would need atomic physics, if we were not making bombs, counting here on being "ahead of the entire planet"? Perhaps, our democracy will move so far ahead that we will let our doctors and candidates in shoulder boards go with God abroad. However, we must not expect that we will receive advanced technologies from the West. The internal transfer of technologies from "defense" is far more important for us than its changeover to "frying pans," which even in 1990 prices would cost not less than \$150 billion.!

In his statement at an international seminar in Venice S. Zemlyanoy, a member of the bureau of the Russian National Committee for the Problem "The Brain Drain," noted that now, for the first time in all the postwar years, an enormous part (one-fifth) of the world intellectual potential is being set into motion. It is not ruled out that the process of intellectual migration may shift from the "evolutionary" stage to the "abrupt" stage. After all, for example, the United States, the main point of attraction of "brains," has accepted about 500,000 intellectuals. According to the estimates of experts, during the 1990's 200,000-250,000 specialists who are scientists will annually leave the former Union (in 1990 about 100,000 left), while in all about 1.5 million highly skilled personnel may leave the country. On the other hand, by 2000 in the United States about 0.5 million workplaces, which require a high level of scientific and technical training, will become vacant, annually "there will be a shortage" of 7,500 doctors in the area of the natural and technical sciences. Thus, far from all emigrants from the CIS [Commonwealth of Independent States] will be able to get a job.

It is possible to imagine two "scenarios" of the "brain drain" from the countries of the CIS: If the assertion of sovereignty by the new states is combined with the development of ties among them, with the preservation of economic and cultural community, and with the assurance of social, political, and economic stability, it is possible to expect that the "brain drain" will take place at the same time from all the sovereign republics with the simultaneous significant increase of the migration of

specialists among them. If in the new states the restriction of representatives of the nonindigenous nationalities acquires the nature of the driving out of the Russian-speaking population, the victims, undoubtedly, will set off in search of a better life for Russia. And here the surplus of highly skilled personnel, whom the scientific, educational, and business structures of the RSFSR will be unable to "absorb," will increase sharply. Subsequently the massive explosive "ejection" from Russia of hundreds of thousands of intellectuals will inevitably occur. In the Baltic states, for example, the Russian-speaking population is oriented toward both the first and the second "scenarios." During the official visit of the minister of foreign affairs of the Republic of South Africa to the Baltic states the question of the departure of people discontent with their situation for this country was discussed. The mass media even reported the appearance of recruiting offices. On the other hand, many people want to leave for Russia, to which periodic appeals to the president and the RSFSR Supreme Soviet testify.

Who is going and where are they going? In 1990, 266,700 people left the Soviet Union for Israel, 141,600 left for Germany, 23,800 left for Greece, 13,100 left for the United States, and even 1,400 left for Hungary. People of the corresponding nationalities made up the overwhelming majority among the people leaving for these countries. Only the United States constitutes an exception. According to the data of sociological surveys, the emigration sentiments among intellectuals are tenfold higher than among other socio-occupational categories.

What does the country lose in case of the mass departure of scientists? In accordance with the traditional approach to this problem, which, incidentally, many specialists dispute, for the donor country the "brain drain" is a deduction from the national wealth, the amount of which is formed from the direct and indirect expenditures on the training of those leaving, as well as the lost profit from the activity of emigrants in the country. Given the departure of 250,000 scientists and specialists the amount of the losses for Russia given the existing method of their calculation will come to \$592 billion.

Today sociologists and political scientists, perhaps, understand best of all the problem of the "brain drain." They warn that the danger of the "intra-union" migration of scientists is far greater than the potential losses from the departure of intellectuals for countries, as has now become fashionable to say, of "distant foreign parts." In the opinion of A. Salmin (the Institute of Comparative Political Science and the Workers' Movement of the Russian Academy of Sciences), not so much the "drain of brains" as their chaotic influx, which is not justified by the real needs of the economy, will become the main practical problem for Russia, which has been forced out of economic considerations to abandon a number of projects and even entire fields of science. Incidentally, today it is nearly impossible to predict the damage or gains from intellectual migration, inasmuch

as the need for "brains" changes radically and unpredictably. It is possible to argue in approximately the same spirit about the enormous unused potential of solar energy or about the reserves of fresh water in the glaciers of Antarctica. So that the talk about the "loss" of \$30 billion in 1990 alone today is beside the point.

Many sociologists are of the opinion that the fears regarding the potential drain beyond the CIS are greatly exaggerated: Among surveyed Moscow scientific personnel only 6 percent stated that they would like to go abroad for permanent residence. Here scientists, who are established with respect to social status and are of a fair age, are far less predisposed to leaving than their young colleagues, but willingly acknowledge emigration as the norm—for other people. While young people, although in words quick on their toes, in fact are not particularly mobile.

What does the public feel today about the people who leave? An all-union public opinion poll, which was conducted on the order of the Russian National Committee for the Problem "The Brain Drain," makes it possible to form an idea of the real orientations of the population. The people, who are often accused of "science phobia," unequivocally reject undemocratic methods of solving the problem of the "brain drain." Only 28 percent of the respondents in Russia gave "undemocratic" responses. In turn 21 percent spoke in favor of "speeding up the putting into effect of a law that makes leaving the country and returning to it easier." Incidentally, the categories of the population, which had suffered the most, and those, who believed that in the winter their family will starve, gave "democratic" responses.

In the opinion of Academician Nikita Moiseyev, a member of the bureau of the Russian National Committee for the Problem "The Brain Drain," the organization of "ordered" activity may be one of the forms of the reduction of the flow of emigrants—given the same level of skills the remuneration of the labor in freely convertible currency of an engineer or researcher, who works in Russia, in the next few years will be about one-tenth the remuneration of a specialist who works in Europe or America. International organizations annually order a large amount of research in the area of economics, ecology, and so on. Many of these jobs could be done in Russia less expensively, more rapidly, and in many cases with a higher quality.

Another version of the prevention of the "brain drain" is the establishment of commercial structures, from joint ventures and commercial firms up to the organization of intercorporate nonprofit institutes, which work in the interests of the funds that finance them. Interstate agreements on the conducting of joint research and design and technological development, such as the Northern Hoop Project, should play not the last role.

Nikita Moiseyev proposes to establish what is called an international "intellectual exchange," which would

become a intermediary between the consumer and producer of the "intellectual commodity." The "exchange" will be oriented not only toward the needs of business, but also toward UNESCO and UN programs and will work in close contact with them, since these organizations can be not only superior intermediaries, but also sponsors of projects. Prestigious international organizations, such as the World Laboratory, will probably be interested in the activity of such an exchange.

In our country over the course of many years new classes of models of natural processes were successfully developed—the standards of mathematical simulation, without which all problems, for example, of ecological monitoring, are of an amateurish nature, were developed. In England one hour of operation of a supercomputer, on which it is possible to make calculations of plasma jets, costs tens of thousands of dollars. Our scientists can fill a similar order on a computer, an hour of the operation of which costs...50 rubles. An entire computer center can exist a year on the money, which the group that "got" the order will receive.

Time will tell how effective the proposed projects of the preservation of the intellectual potential are. Perhaps, we will actually succeed in saving our science from the fate that has befallen the economy. But it is useless to keep Odysseuses from voyages to distant countries. Whoever wants to and can will leave all the same. It is important that contact with the homeland not be severed. Perhaps, when the time comes, the Odysseuses will return—and not empty-handed....

Nuclear Weapons Research Lab To Convert to Peaceful Projects

927A0156A Moscow ROSSIYA in Russian
19-25 Feb 92 p 2

[Article by Aleksandr Levin: "Baker at the Nuclear Center of Russia"]

[Text] U.S. Secretary of State James Baker spent only 26 hours in the Urals. But he visited the heart of the nuclear weapons complex—the closed city of Chelyabinsk-70.

"Your coming here testifies that the times are rapidly changing," V. Mikhaylov, deputy minister of atomic energy of Russia, said in opening the meeting of the U.S. Secretary of State with scientists of the Scientific Research Institute of Technical Physics.

The scientific research institute was established in 1955 for the conducting of scientific research and design work on the development of nuclear weapons. The strength of the scientific search institute, Corresponding Member and Doctor of Physical Mathematical Sciences Ye. Avrorin, its scientific director, believes, lies in the high skill of the personnel. The time has come to switch its scientific potential to a peaceful heading. The specialists here can work in nuclear medicine, in the area of fiber optic communications, and in the development of various kinds of explosion technologies. But the situation of

the institute is quite serious owing to the lack of the necessary financing. Therefore, Avrorin said, we are interested in cooperation with foreign scientists. Ye. Avrorin proposed several specific ideas on joint cooperation with Americans in the area of the destruction of the nuclear arsenal. James Baker supported these proposals and spoke in favor of establishing in Chelyabinsk-70 an international center for the elaboration of peaceful scientific projects. This would erect a barrier to the brain drain.

"There still exist in the world criminal regimes," the U.S. Secretary of State said, "which long to acquire nuclear weapons. This must not be allowed."

While in Yekaterinburg, the high-ranking guest visited the site of the shooting of Nikolay II and a museum of graphic arts. Moreover, there was his conversation with E. Rossel, head of the administration of Sverdlovsk Oblast.

"Our conversation," Eduard Rosse! says, "touched upon various themes—from the problems of conversion to the prices for sausage. But I want to single out several, in my opinion, important things. The main one: It was possible to reach an agreement on the opening in Yekaterinburg of an American consulate. It might be opened in October of this year.

"We, on our part, made a number of specific proposals on the establishment of joint ventures, which are connected with the processing and storage of food products, color television tubes, the construction of an international airport in Koltsovo. All the proposals were turned over to James Baker, who will deliver them to the U.S. Congress."

Russian Academy of Sciences Faces Massive Layoffs

927A0146A Moscow RADIKAL in Russian
No 5, Feb 92 pp 9, 10

[Article by Vladimir Pokrovskiy: "The Leadership of the Russian Academy of Sciences Is Preparing Massive Layoffs—Such a Conclusion Was Drawn at the Conference of Scientists of Academic Institutions of the Moscow Region"]

[Text] The conference was held on 5 February and was in essence the conclusion of the "Big" Conference of Scientists, about which RADIKAL wrote so much at the end of last year. At that time due to the lack of a quorum an important question—on the transformation of the organizing committee into a permanent body and the election of its members with a quota of one person per 20 delegates—remained unsettled.

The discussion of the candidates and the election procedure took place very quickly. The conference hall of the Physic Institute of the Academy of Sciences was made available to the delegates for only two and a half hours. The discussion of the current state of affairs and the

careful examination of the reasons, for which the December conference failed, took up the bulk of the time.

As to the threat of impending massive layoffs, today it will seem like a revelation to hardly anyone. Like the overwhelming majority of Russian scientists, the scientists of the RAS [the Russian Academy of Sciences] have been placed on a "survival ration." The money being allocated to the academy is enough only for the wage and mandatory contributions to the budget—this is at best. Research programs are dying away, equipment is not being purchased, trips to see foreign colleagues have turned into a nearly unrealizable dream. What of trips? Even scientific periodicals from abroad are unavailable.

But it is also becoming more and more difficult to pay for this anechoic altitude chamber. The 160 million, which have been allocated to the academy for the first quarter, are obviously insufficient. Among the academy leaders they are saying more and more insistently that there are too many scientists at the academy.

As Aleksey Zakharov, chairman of the organizing committee, reported at the conference, recently Aleksandr Konoshenko, director of the planning and finance administration of the RAS, gave instructions to all the academy accounting departments to prepare a report on the financial status of each institute. Such reports on the item-by-item expenditures will be the basis for the analysis of the economic status of the RAS. It is feared that this analysis will precede the start of repressive measures with respect to institutes.

Strictly speaking, it is just as pointless and just as effective to protest the very idea of mass reductions as it is to curse bad weather. The experience of the former socialist countries also testifies to this. The leaders of the RAN, Yuriy Osipov and its vice president Andrey Gonchar, also believe that it is impossible to raise the standard of living of scientists to the proper level. True, Zakharov reported, they then and there made a reservation: The centralized procedure of reductions cannot lead to anything good—those people, whom it would be necessary to cut, will probably not be cut. This can mean just one thing—the institutes will be placed in such a financial position, in case of which self-reduction will turn out to be inevitable. But most likely the good intention to do without centralized layoffs will simply remain a good intention.

None of the top scientific leaders of Russia even allows that institutes are capable of saving themselves independently, without the responsive leadership of anyone whomsoever. However frivolous this sounds, someone calculated that it is possible to obtain the amount in dollars, which is needed for the support of the entire academic scientific potential, by having sold to the West 168 kg of the superexpensive rhodium, which is available at the academy. (Of course, it is possible to discuss such a version in earnest only in close company over a cup of 300-ruble coffee.)

The organizing committee, like the leaders of the RAS, believes: There should be no direct reductions. Moreover, reductions are ineffective. The saving turns out to be meager, but even it can be taken from the institute (today there are already serious grounds, in the words of Zakharov, for such apprehensions). However, if layoffs ensue, it is necessary to prepare for them.

A number of steps, with which Osipov and Gonchar for the most part agreed, were proposed. Among them is complete openness concerning the financial status of the institute. If the director of an institute denies his associates such information, one should apply to the organizing committee, and then through Konoshenko, "from above," such information will be made available to labor collectives.

Further, the scientific council should without fail make the decisions on the elimination of "unpromising" subdivisions. Inasmuch as today it is by its status only a consultative body under the director of the institute, conflicts can arise. If the director in such a situation ignores the opinion of the scientific council, one should (and the leaders of the RAS agree with this) appeal to the presidium for help. It is also recommended to set up at institutes special inspection commissions for the monitoring of the procedures of reductions. Half of such commissions should be appointed and half should be elected, inasmuch as "popular people should implement unpopular measures."

It was reported that a scientific labor exchange is being established under the organizing committee (more details on it in one of the next issues). The legal recommendations of Eduard Gelman from the Institute of Atomic Energy imeni Kurchatov also seemed very sensible to us (see alongside).

The discussion of the results of the December conference of scientists lacked a festive mood. Practically all the decisions made at it were openly ignored by the leadership of the RAS. At the general meeting of the RAS, which was held several days later, none of the academicians who spoke said a word about the status and rights of scientific associates of the RAS. The scientists both were and remained serfs, whom it befit not to demand, but to ask and to "eat" what they serve.

But the basic reproaches, as should have been expected, were aimed at the part of the organizing committee from the Club of Voters of the Academy of Sciences.

"We missed a historical opportunity," Vladimir Rotar from the Central Institute of Economics and Mathematics believes. "The conference was made ready at such a time, when the academy was up in the air and its leadership was frightened and could not afford any revolt from below. It was necessary to appear on the rostrums not with resolutions and appeals, but with absolutely specific demands. The second tactical error is that the leadership of the academy and representatives of the scientific community were intermixed on the organizing committee. Masters and hired personnel cannot

move as a unified front in such a situation. And, of course, it was impossible to admit academicians, who were not elected by scientific collectives, to the conference with the right to vote. This foreordained failure. Which is what happened."

In reality the situation is even worse. As the sociological surveys of Dina Raykova showed, both the conference delegates and the scientific community as a whole (even the percentages coincide) for their most part are not ready for resolute changes and prefer the slow, gradual reform of the system of the RAS. In short, without the unelected academicians the result of the conference would most likely have been just as pitiful.

Last year's reversals of fortune are receding into the past. New problems are on the way. In particular, the situation with the decree "On the Work of the Organizing Committee for the Organization of the Russian Academy of Sciences," which was voted down in the Supreme Soviet of the Russian Federation and about which we wrote in the second issue of *RADIKAL*. The conference resolved to address to the constitutional court of Russia the request to examine the ukase of Yeltsin, which is devoted to the establishment of the RAS and the writing of the Temporary Charter of the RAS.

Legal Aspects of Impending Russian Academy of Sciences Layoffs

927A0146B Moscow *RADIKAL* in Russian
No 5, Feb 92 p 10

[Article by Eduard Gelman under the rubric "Reform in Science": "Why It Is Worth Remembering the Legal Aspect of a Layoff"]

[Text] The questions of the layoff of associates in connection with the reduction of staffs at institutes and other institutions of the RAS [the Russian Academy of Sciences] are regulated by the legislation that is in force at present in the Russian Federation, namely the RSFSR Labor Code and in part the RSFSR Law on the Enterprise and Entrepreneurial Activity, the USSR Law on the State Enterprise and Association, as well as a number of ukases of the RSFSR and USSR Supreme Soviets. Here it should be understood that all the laws and other legislative and standard acts of the USSR are in force in the Russian Federation only in the area, in which they are actually not at variance with legislative acts of the RSFSR, including ukases and orders of the President of the Russian Federation, that is, they are in force by way of the filling of the legislative vacuum.

Such a relationship of the legislations of the USSR and the Russian Federation is also the norm for world legal practice, it is directly set down in the documents of the Minsk agreements on the CIS [Commonwealth of Independent States].

According to both laws the enterprise independently determines the total number of personnel and approves the staffs, proceeding here from the available assets and

the amounts of work and being guided by considerations of production expediency. The labor plan for production personnel and the manning table for administrative and management personnel serve as the basic document that specifies the number. The actual necessity and validity of layoffs are also established in accordance with these documents.

Specific actions on the identification and validity of layoffs are the prerogative of the director, if in the charter of the enterprise another thing is not directly recorded (for example, the necessity of a sanction or the veto power of the scientific council, the STK, the board, and so forth). The right of the director to these actions is his property right and is based on the fact that he, by definition, acts in the interests of the owners of the enterprise.

At present the state and Russian voters are the owner of the enterprise (scientific or other) at the RAS, in spite of the ukase of the president, in which the transfer of enterprises of the USSR Academy of Sciences to the ownership of the RAS is declared. The point is that the transfer has actually not been effected. The Russian Academy of Sciences does not yet have the appropriate certificates and, moreover, no one at the Russian Academy, it seems, is dealing with the questions of the division of the balance between the RAS and the Russian Federation.

The confusion both in the authority of the president to dispose of property of the state and in the expediency of transferring academic enterprises is considerable.

The authority of the administration to carry out reductions of the size of the staff is indisputable, but it is possible to dispute the expediency along the following chain: director—president of the RAS—the Government of the Russian Federation—the Supreme Soviet of the Russian Federation. In accordance with the principle of noninterference in the internal affairs of the owner judicial bodies do not consider questions of expediency.

If the collective agreement loses its validity due to the expiration of the term of effect or other reasons or the text of the agreement simply does not protect against the reduction of staffs or personnel, all the people, who are laid off on this basis, can count only on individual means of protection—through the trade union and the court. Here not the administration of the RAS, but the administration of the enterprise will be the defendant, inasmuch as the RAS prudently promulgated an order that transfers to local bodies all authority on the carrying out of reductions, having reserved the authority to distribute the financing of the RAS—actually to distribute among the subjects of the RAS the reason for this reduction.

Here an analogy between the Supreme Soviet and the Government of the Russian Federation, where the Supreme Soviet reserved the right to suspend currency emission, but gave the government authority on the implementation of plans of reform, is appropriate.

Individual means of protection shift the question to the level "Why are they laying me off, and not my colleague?" (The typical Soviet "Catch-22.") In the rule-of-law state in such cases a question arises: What does such a layoff cost the owner of the enterprise? According to the Labor Code first of all they lay off low-skilled personnel with the least production experience. At the same time the administration has the right to carry out the reshuffling of personnel among available positions in a group that is similar in type, that is, a worker, whose position is not being cut, can be laid off, while a worker, whose position is being eliminated, can be retained. But all this is only within the limits of one group of jobs or occupations.

One of the pieces of evidence of higher skill is the length of work in the given occupation in the given sector or at the given enterprise. The setting up of an examination for the comparison of the skills of a laid off associate and a retained associate is considered inadmissible. Given equal labor productivity and equal skills preference in being kept on the job is given: to citizens with families (with two and more dependents); to people, in whose family there are no other workers with an independent wage; to workers with a long length of service at the given enterprise; to workers, who got an occupational disease or job injury at the given enterprise; to personnel who increase their skills without leave from production; to disabled veterans and members of families of servicemen, who died defending the USSR, and a number of other categories of personnel.

Leading Writers, Artists Call for Intellectual Property Laws

927A0160A Moscow TRUD in Russian 21 Mar 92 p 2

[Article under "Letter to the Editor": "Intellect Needs Protection"]

[Text] With the acquisition by Russia of genuine independence the activity of union structures, and particularly the USSR State Agency for Copyrights and Related Rights (GAASP), ceased on its territory. Today the creative intelligentsia is faced with the task of establishing a fundamentally new organization, which deals with questions of the protection of the rights of authors and performers in the Russian Federation not "on behalf of" the authors, but with their immediate participation. Here it is necessary to avoid the establishment of a state monster like the former VAAP [All-Union Copyright Agency], which by a "Pavlovian" ukase was quickly "restructured" into the GAASP, having instantaneously "forgotten" its founders.

The necessity of two different functions in the activity of the organization for the protection of intellectual property rights does not raise doubt.

One is the establishment of norms, the standardized regulation of legal relations in this sphere, representation on behalf of the state at international forums and in intergovernmental organizations, the preparation and signing of international agreements on the mutual protection of rights, the registration and the monitoring of the activity of societies for the protection of intellectual property rights (literary and booking agencies). This is the function of a state organ.

The other is the collective management of intellectual property rights (copyrights and performers' rights) and mediation in case of the promotion of works, the cession, importing, and exporting of rights, the collection and distribution of the fee, and so forth. This is the task of public organizations of the holders of the rights themselves (civic associations, agencies, and so forth), which are based on the terms of individual membership. As domestic and world experience shows, authors also trust only such associations. In 1870 A.N. Ostrovskiy established in Russia precisely such an organization, V.I. Nemirovich-Danchenko headed precisely such an organization during the first years of Soviet power.

For the protection of the interests of authors and performers it is important that they have the opportunity to choose among competing organizations—a monopolist is not interested in the best service of authors and performers.

The Ukase of B.N. Yeltsin of 24 February on the establishment of the Russian Intellectual Property Agency (RAIS) under the President of the Russian Federation was recently promulgated.

It seems that it has come to pass! Finally a structure has been established for the implementation of state functions in the area of the protection of intellectual property rights.

For many years figures of science and culture and lawyers sensed extreme trouble in the area of the protection of copyrights in the former USSR and, hence, in Russia. The reason lay first of all in the lack of civilized legislation and in unprecedented monopolism, which was personified in the All-Union Copyright Agency, which was united in three persons.

The agency was established in 1973 under the guise of "democratization," the USSR became a party to the Universal Copyright Convention. The grounds for this step were the more extensive use of Soviet works abroad and of foreign works in the USSR. But this is just the tip of the iceberg. So-called dissident literature, which had aroused much interest throughout the world, had already appeared. The state did not intend to lose hold of control over this process. It was for this purpose that it was decided to use an organization that retained the sign of an "authors'" and "public" organization.

The pitiful results of the activity of the VAAP [All-Union Copyright Agency] are well known today to everyone. For years the agency "ceded" rights without the knowledge and consent of authors for a paltry fee, paying ludicrous royalties, and "held and did not let go of" much of what now constitutes the pride of Russian literature. Many writers and scientists personally experienced the fruits of the close friendship of the agency with the Committee for State Security. Moreover, the VAAP bears direct responsibility for the now existing legal incompetence and ignorance in copyright matters of the owners of intellectual property. And this also was policy.

We want to believe that with the establishment of the RAIS an end has been put to the past contempt of the powers that be for the rights and interests of creators.

In giving our blessing to the new presidential agency for a safe journey, we want to wish it success and concentrated attention to the priority problems, without the solution of which, in the deep conviction of the creative intelligentsia of Russia, an integral and well-balanced state policy in the area of the protection of intellectual property rights is impossible.

First of all it is necessary to draft and pass most promptly legislation of the Russian Federation on the copyright and related rights, which fully satisfies the requirements of international conventions in this sphere. This will enable our state to join the world community as a full member and will promote the switching of the copyright from the track of the command system to the principles of a market economy.

After the passage of the law Russia should become without delay a party to the Bern, Rome, and Sound Recording Conventions.

The agency should take upon itself the formulation and practical implementation of a state program on the training of specialists in the area of the protection of intellectual property.

We hope that the new agency will become the initiator of the demonopolization of the sphere of the collective management of copyrights and related rights and will promote the revival of the Russian tradition of authors' societies and associations, which will be able to carry out their functions on the basis of principles that are generally accepted in the civilized world.

We regard this task under present conditions to be particularly important. It is no secret that within the former VAAP (GAASP) the system of accounting of the so-called public performance of works was fine tuned. Now, during the difficult period of the transition to a market, the material well-being and, at times, let us say frankly, the survival of thousands of figures of literature and art depend on the smooth functioning of this system. The destruction of this system is intolerable. But the return, no matter under what plausible pretexts this is done, to the old practice of the monopolization of state and collective functions within a single state department is also equally undesirable.

We stand up for the holders of rights with the assistance, of course, of the RAIS and Russian creative unions having the opportunity to establish at their own desire societies for the collective management of their own rights and for the structures of the former VAAP-GAASP, which earlier carried out these functions on a monopoly basis, being transferred with demonopolization from the day-to-day management of the RAIS to the jurisdiction of the newly established societies.

Only in case of such a "division of powers" will creative workers completely free themselves from the dictation of the monopolies. Only then will the goal declared by the presidential agency—the effective protection of intellectual property and its creators—also be achieved.

[Signed] Mikhail Dudin, Fazil Iskander, Bulat Okudzhava, Valentin Sidorov, Boris Uspenskiy, Mikhail Ulyanov, Aleksandr Gelman, Mark Zakharov, Vladimir Vasilyev, Elem Klimov, Mariya Zvereva, Pavel Finn, Igor Maslennikov, Sergey Solov'yev, Vladimir Dashkevich, Nikolay Karetnikov, Mikael Tariverdiyev

Head of Intellectual Property Agency Meets With Editors, Authors

927A0140A Moscow TRUD in Russian 11 Mar 92 p 1

[Article: "It Is Also Property. But Intellectual"]

[Text] Meetings of Prof. M.A. Fedotov, director of the Russian Intellectual Property Agency under the President of Russia (RAIS), with editors in chief of literary journals, representatives of creative unions, well-known Russian writers, and directors of publishing houses were held on 5-6 March.

The basic directions of the activity of the Russian Agency and its priority interests were discussed at the meetings. The speakers supported the presidential Ukase of 24 February 1992 on the establishment of the RAIS. The provision of the Ukase concerning the fact that the RAIS is the legal successor of the abolished USSR State Agency for Copyrights and Related Rights was greeted with particular approval. Here the particular scrupulousness, with which the new state body is approaching all the liabilities of the abolished State Agency for Copyrights and Related Rights, was emphasized. These liabilities are unconditionally recognized by the new agency.

Among the priority tasks of the RAIS there was named, in particular, the preparation of the corresponding recommendations for initiatives of the President of the Russian Federation in the area of the amendment of tax legislation with respect to the owners of intellectual property.

Commentary on New Software Protection Law

927A0140B Moscow POISK in Russian

No 9, 22-28 Feb 92 p 12

[Article by Irina Savelyeva, lawyer of the Russian-American legal firm Lex International and member of the board of the Association of Suppliers of Software Products: "The Birth of a Law"—first two paragraphs are POISK introduction]

[Text] February 19 may become a red letter day for Russian law and domestic information science. On this day the Supreme Soviet of the Russian Federation passed in the first reading "The Law on the Legal Protection of Programs for Computers and Databases." The new standard act made it possible to raise the legal support of programming to the international level and to ensure the protection of the rights of this specific area of creativity at a hitherto unequaled height.

Irina Savelyeva, a prominent lawyer from the Russian-American legal firm Lex International and a member of the board of the Association of Suppliers of Software Products, comments on the event specially for Computer Market.

First of all it is necessary to say that the new law applies to all existing types of programs: operating systems, applications programs, and so on, regardless of the form and medium. It also encompasses object code and source code. The only thing, which has been removed thus far from under the effect of this act, is: algorithms and programming languages. The situation with algorithms, for example, is the perennial problem of the protection of copyrights: Protection applies to the form, but not the idea of a work.

However, in turn, there are also several extensions of the area of effect of the law. It encompasses not only programs themselves, but also preparatory materials, as

well as the audio-visual display generated by the program. That is, for example, the form of the output of the program on the monitor screen.

In principle the law has only gone through the first reading. Then it will be published. Only then will the second final reading of the law, its passage, and its taking of effect occur.

Today we will touch upon the two most vital problems of the protection of authorship. The first is the relations of the program developer and the employer. The second is the illegal copying of a software product.

As we have already written in POISK, with respect to programs, which were developed by way of the fulfillment of job duties, there are two approaches. The first is the Anglo-American approach, which transfers unconditionally to the firm itself all the rights to a product that has been developed by a regular staff member of the firm. The second is the European approach. It provides for a great degree of freedom of the author.

When preparing the law we took into account that the following of the Anglo-American approach is often unacceptable in our society. Therefore, in my opinion, a worthy compromise was found.

In Article 13 of the law it is stated that in the settlement of such issues the presumption that all the economic rights to programs, which were developed by way of a job assignment, belong to the hiring firm, is realized. That is, if it is known that the product was developed in accordance with an order, instruction, or decision of the employer by a regular staff member or under contract by a special assignment, the right to settle all questions of the sale, transfer, making of corrections, and use of a program belongs to the employer himself. I will note, it is true: Provided a different decision is not stipulated by agreement or contract. In such a case the author can retain a portion or all of the rights in full.

The right to authorship and the author's signature: as a pseudonym, a number, or a real name, is considered an inalienable right of the developer.

I will note once again that this concerns only the programs which were developed during the fulfillment of a job assignment or duties. Everything that goes beyond this framework reserves the rights of authorship for the developer. That is, if a program was developed during nonworking time or not in accordance with the specialization of the firm, it does not give the firm the rights to its use.

This also applies to those cases, when the developer used for the preparation of his product the equipment and materials of the firm. It is possible to demand from him—and this will be entirely legitimate—payment for machine time or the acquisition of a license for the used support software. But all the same this does not give the firm the rights to this development.

In the law considerable space is devoted to the protection of the copyrights to software products against unsanctioned copying. The copies of a program, which are copied or distributed in violation of the copyright, that is, without the obtaining of official permission of the holder of the rights for this, are recognized as copyright-infringed (or illegal, pirated). In case of the discovery of such cases the "pirate copies" can be seized or even confiscated. Incidentally, just as the equipment, on which they were produced.

At the same time rigorous steps of material pressure are also envisaged. In particular, a firm, the rights of which have been infringed, can demand compensation not only for the direct losses, but also for the deferred profit. In a number of cases, when the plaintiff finds it hard to estimate accurately the amount of damage, we propose the payment of compensation "in a fixed amount." This concept presumes the exaction from the defendant of monetary compensation, the amount of which the court establishes. In the United States, for example, its range is from \$500 to \$20,000.

Of course, in one article it is impossible to cover all the questions. I am certain that a place will be found for them in the process of discussing "The Law on the Legal Protection of Programs for Computers and Databases." On my part I promise that we, too, will return to this theme again.

Scientists Demand Legal Protection for Discoveries

927A0159A Moscow NEZAVISIMAYA GAZETA
in Russian 20 Mar 92 p 6

[Article by Yuriy Meshkov under the rubric "Science": "Scientists Write a Letter to the President About the 'Brain Drain.' An Effective Law on the Legal Protection of Discoveries Is Necessary"]

[Text] "The closer the state is to collapse, the more numerous its laws are...." If we proceed from this definition of state durability, which was given by Tacitus in his famous *Annals*, our state is to go on standing and standing. We lack very many vitally important and working laws. With regard to one of them a group of 11 scientists, who hold a rather high position in the Russian scientific hierarchy, recently addressed a letter to President Boris Yeltsin. It is a matter in it of the improvement of the legal protection of scientific discoveries in the Russian Federation.

"The abandonment of state examination, which establishes the authenticity of discoveries and the priority of the authors and the country," it is stated in the letter, "and its replacement with the principle 'whoever was the first to publish it is the one who discovered it,' as some scientists propose, is intolerable. This will lead to the loss of the objective criterion of the evaluation of the fundamentality of a discovery and to its replacement with the self-evaluation of scientific labor, as well as will not promote the effectiveness of basic research."

Sentiments like "one must not allow the squandering of state assets on giving incentives to the authors of discoveries," which is current, unfortunately, among the opponents of the legal protection of discoveries, also do not inspire optimism. However, according to the information that the authors of the letter have, the annual payment for all registered discoveries comes to only 50,000-60,000 rubles.

Incidentally, much has been written and said about the fact that the attitude toward domestic lucid minds in science leaves much to be desired. But whereas in former times our scientists were forced to live and work for the most part in isolation, absolutely without seeking attention to their person on the part of the governments and scientific circles of other countries, now the situation is changing radically. The increasing openness of society—including in the sphere of scientific contacts—is making it incumbent to ponder in earnest the problem of the "brain drain" to countries, where these very brains will be appreciated. (Surprisingly, why did the authors of the letter to Yeltsin overlook this aspect?)

There is another aspect of the problem of the lack of recognition in science, which is justly indicated in the letter. Young scientists up to the age of 35 make up 34 percent of the total number of authors of registered discoveries. This circumstance is particularly important,

inasmuch as precisely young people are often confronted with the display of conservatism in science.

"The official confirmation of the rights of scientists to discoveries," it is stressed in the letter, "will make it possible to obtain the recognition of a specific basic result, which has been established among others by a young scientist, without linking this recognition to other factors (academic degree, position, previously received prizes, awards, and so on)."

In connection with the emerged "brain drain" we will not forget that precisely this age category of the scientists is distinguished by the greatest mobility. According to official statistics, young scientists, who are the authors of discoveries, constitute a third of all the discoverers in science. But if we take into account the peculiarity of the traditions of our scientific school, in accordance with which scientific bosses, like vampires, are capable of living an infinitely long time on the ideas of their graduate students, who have no rights, the share of young people among the authors of discoveries will prove to be much greater. This will come through with all inevitability, if the examination is conducted not in the departments of the Russian Academy of Sciences, but with the help of specialized expert commissions that are made up of highly skilled representatives of academic, sectorial, and VUZ science, with the mandatory participation at all stages of the examination of the authors of the discoveries. The learned men also advocate this in their appeal to Yeltsin.

After the settlement of internal questions of the legal protection of scientific discoveries in the Russian Federation the authors of the letter propose to resume the talks on the international registration of discoveries within the framework of the World Intellectual Property Organization (WIPO). This version was already discussed by the member countries of the WIPO in the late 1970's. At that time the Geneva Agreement on the Potential International Registration of Scientific Discoveries was adopted.

It is easy to understand the urgency of the quickest settlement of the question of the legal protection of the work of Russian scientists, if you consider that of the 402 discoveries, which were entered in the state register during the entire 35-year period of their actual registration, more than 350 scientific discoveries were made in the Russian Federation.

Patent Official Urges Speedy Passage of Protective Legislation

927A0159B Moscow NEZAVISIMAYA GAZETA
in Russian 20 Mar 92 p 6

[Interview with Viktor Blinnikov, first deputy chairman of the Committee for Patents and Trademarks of the Ministry of Science, the Higher School, and Technical Policy of the Russian Federation, by Dmitriy Frolov; date and place not given: "From Russian With a Patent.

The Supreme Soviet Should Pass Legislation on Industrial Property"—first paragraph is NEZAVISIMAYA GAZETA introduction]

[Text] The protection of intellectual property, including copyrights to inventions, trademarks, and production prototypes, undoubtedly, is one of the unquestionable priorities of civilization and accordingly an indicator of its development. The first law on the granting of privileges for inventions appeared in England in 1623. Russia, which, by the definition of the classical author, is also capable of giving birth to "Newtons keen wit," acquired a similar law only under Aleksandr I—in 1812. Therefore, the author of the above-mentioned assertion only as an exception was able to obtain his own, to use contemporary language, patent for a method of producing varicolored glasses and beads. However strange this is, the descendants of the master of Russian invention at the end of the millennium found themselves in approximately the same situation: Today there are no longer prevailing legislative acts that protect their copyrights. The situation of inventors in the other former Soviet republics is even more deplorable—there are there not only no laws, but also no patent offices. The State Council, having eliminated the union structure, thereby destroyed the unified patent space. It is possible to argue about how to divide, for example, the navy, it is also possible to argue about its very necessity in one state or another, but it is obvious that any country, which seeks membership in the enlightened world, needs a patent office, but it is impossible to divide it according to the principle "you scratch your back and you scratch...mine." So did they not hurry with the State Patent Office?

[Blinnikov] At that time it was simply impossible to explain anything to anyone, says Viktor Blinnikov, first deputy chairman of Rospatent [the Committee for Patents and Trademarks of the Ministry of Science, the Higher School, and Technical Policy of the Russian Federation]. A new law, which replaced the legislation that was based on principles formulated back in 1919, in conformity with which all the rights to an invention, which was protected by an inventor's certificate, belonged not to the author, but to the state, was passed shortly before this. Precisely such an approach, the socialist approach, to intellectual property led as a result to the crisis of invention, although in quantitative terms we were among the first—in a year up to 90,000 inventions were registered. The problem was in their introduction. Enterprises were not interested in this, and the reason for that was the lack of an effective economic mechanism and competition. The inventor received a reward subject to introduction and therefore, in turn, became an indifferent person. Market relations require that he himself become the owner of the invention as a commodity—the patent system, which exists throughout the world, guarantees precisely this. A similar practice was envisaged by the new law—instead of inventor's certificates patents should have been issued.

[Frolov] To all appearances, Russia will pass its own legislation, which is based on the same principles. But what are the others to do?

[Blinnikov] In the other countries of the CIS [Commonwealth of Independent States] they intend to establish their own patent offices. But they have neither personnel nor patent funds. For example, in Ukraine the recognition of inventions will be achieved by the so-called all-comers method. That is, there is no examination, and a patent will be issued for practically all submitted applications. If you consider that thus far as a result of an examination somewhere around 50 percent have been recognized as inventions, it is easy to draw conclusions about the degree of objectivity of such a method.

[Frolov] Does this mean that the unified patent space will share the fate of the economic space with all the ensuing consequences?

[Blinnikov] I hope not. A conference, in which representatives of Russia, Ukraine, Belarus, Kazakhstan, Moldova, Turkmenistan, and Armenia and, as observers, Azerbaijan participated, was held on 27 December of last year in Minsk. An understanding, in accordance with which an interstate convention on the protection of intellectual property has to be prepared, was reached. Time will be required for this, therefore, the decision was made to establish for the time being an interstate organization, which includes an administrative council of representatives of the states, a patent office, and a patent court. But before this happens, the presidents should promulgate a ukase, which confirms the recognition of the validity on their territory of previously issued protective documents of the USSR for objects of intellectual property and the assurance of the protection of the rights of their owners and authors. Now everyone is waiting for Russia, and, as far as I know, documents have already been prepared.

[Frolov] All this time the State Institute of Patent Examination did not cease working, the flow of applications for inventions also did not cease. On what can their authors and the experts, the staff of which, incidentally, was intended accordingly for the needs of not only the former Union, but also foreign applicants, count?

[Blinnikov] Applications actually continued to be received, and patents are being issued to the authors of those of them, which were recognized as inventions before the suspension of union legislation. Foreign applicants, of course, need firm guarantees—they are biding their time.

As for the experts, we tried as much as possible to keep these world-level specialists on the staff of Rospatent, having taken care of the allocation of assets for the existence of the institute and as a reserve for future interstate structures.

In the immediate future one should expect the approval by the Supreme Soviet of Russia of new legislation on industrial property. In contrast to union legislation it

was not widely published, although it is also not its literal repetition. The absence of public debates is also explained, to all appearances, by this atmosphere of secrecy. However, this does not at all signify only approval: Aleksandr Korchagin, former director of the State Institute of Patent Examination, spoke very negatively of the draft, which, in his opinion, "decreases the interest of domestic producers and affords extensive opportunities for the patent expansion of foreign firms." It remains only to guess how popular such a point of view is among specialists and to what degree it corresponds to reality.

Ukrainian Inventors Still Lack Adequate Patent Protection

927A0165A Kiev PRAVDA UKRAINY in Russian
17 Mar 92 p 2

[Article by Igor Kravchuk, deputy chairman of the Republic Council of the Society of Inventors and Efficiency Experts of Ukraine, under the rubric "Urgent": "Who Will Protect the Inventor? Patent Affairs"]

[Text] The head of Valeriy Leonidovich Petrov, chairman of the newly established State Patent Office of Ukraine, "is spinning"—in the shortest possible time he has to build a patent system practically from scratch. There is no sound patent collection, no library, no Poisk firm.... Whatever they say there, thus far they have not selected premises, the staffs have not been approved, in the Supreme Soviet the Temporary Statute "On the Protection of Industrial Property" has become bogged down. And here again inventors "are tearing to pieces": Where is one to submit applications, when will there be the Law on Invention and other standard documents, why for entry and use of the patent collection under the Ukrainian Scientific Research Institute of Scientific and Technical Information and Technical and Economic Research it is now necessary to pay tenfold more than earlier?

It is possible, of course, to cite the difficulties with the budget of Ukraine and the total lack of premises for various state needs. But will the inventor or efficiency expert, who earlier was also not spoiled by attention and concern of the state, really be better for such explanations?

Yes, it has become difficult to live, to work, and, believe me, to invent, but it is even more difficult to open the way for innovations.

But who can calculate what irrecoverable losses Ukraine is incurring today from the inability to protect products of intellectual labor with protective documents?

Several years ago the then still union decree on the development of the independent technical creativity of workers was adopted. The All-Union Society of Inventors and Efficiency Experts dealt with this.

In Ukraine about 350 clubs of independent technical creativity appeared. Tax credits were granted for the cost

accounting formations that were set up in the system of the All-Union Society of Inventors and Efficiency Experts. An opportunity appeared to support the inventor materially and financially and to hire lawyers and patent experts to give legal assistance to innovators. Exhibitions, reviews, and rallies were revived. In short, life began to seethe. The inventor was prepared to give everything so that the state would benefit.

Patronage work in the countryside and assistance to children, school children, and students were stimulated. But this is, after all, the continuation of the clan of creators, this is the future of Ukraine, this is the partial solution of a number of social problems (free time, juvenile delinquency, material prosperity).

And now the market, the freedom of enterprise, and going abroad have led independent technical creativity to the verge of ruin.

If we take just the Society of Inventors and Efficiency Experts of Ukraine (the successor of the All-Union Society of Inventors and Efficiency Experts), it as before is filled with concern for the rank and file inventor, but now no longer in deed, only morally.

The main source of financing of the Society of Inventors and Efficiency Experts of Ukraine is deductions in the amount of 0.6 percent from the saving that is derived in case of the introduction of innovations—it is drying up before our eyes together with the subsiding of invention and efficiency promotion at enterprises and organizations. Exorbitant taxes are strangling temporary creative collectives, small introducing enterprises, and centers of independent technical creativity. Experienced organizers of technical creativity are leaving, clubs of young technicians are falling to pieces, and, what is the primary thing, the invention potential is declining and with it the road to progress is getting overgrown.

The task today is to expedite the work on the formation of a patent system, to publish standardized documents a little more quickly, and to create for the inventor the conditions for full-fledged creativity.

It is actually very difficult for the State Patent Office of Ukraine to expand work. The reasons, as was said, are many. Here one would like to know why one should not combine efforts? After all, a number of functions of the patent office coincide with the charter directions of the activity of the Association of Inventors and Efficiency Experts of Ukraine.

Based on this one should establish structural subdivisions (affiliates) of the State Patent Office of Ukraine on the basis of the Crimean Republic Council, the oblast councils, and the Kiev City Council of the Society of Inventors and Efficiency Experts of Ukraine. It would be possible to delegate to them temporarily—for the transition period of the formation of the patent system—some functions of the State Patent Office. And first of all

the making of a partial preliminary examination of applications (without the right to issue priority certificates and to enter them in the State Register). The councils of the Society of Inventors and Efficiency Experts can also defend the rights and interests of authors in the courts and in arbitrations with the granting of the opportunity to impose sanctions against the violators of legislation. We are also prepared to take upon our shoulders such a large and crucial section of the work as the formation of the institution of patent lawyers with the subsequent increase of their skills and certification at the Kiev Center of Patent Services.

For the fulfillment of all these functions the system of the Society of Inventors and Efficiency Experts of Ukraine has a rather good material base, sufficiently highly skilled staffs of patent experts, a network of legal advice offices, the Ukrainian Association of Patent Experts, and so on.

The advantage and feasibility of doing this with benefit for the inventor exist.

And the decrease of the load on the experts of the State Patent Office will make it possible to determine accurately enough at the headquarters of the office the necessary optimum number of specialists.

And as a result it will be possible to reduce the state allocations for the support of the activity of the patent office.

As soon as the interest of authors in the fate of their inventions is restored and the reliable protection of their priorities appears, it will also be possible to think about benefits for genuine creators of technical progress and about the welfare of the state.

P.S. This article might not have seen the light, if we had not sensed an interest in the joint solution of problems on the part of the State Patent Office. However, during a recent joint examination of our suggestions the executives of the state patent service considered them with respect to the key questions to be...inexpedient.

Confusion Persists in New Russian Patent Office

927A0147A Moscow *RADIKAL* in Russian
No 5, Feb 92 p 10

[Article by Candidate of Economic Sciences Nikolay Linnik under the rubric "The Law Is the Law": "The State Patent Office Has Died. Long Live the Committee for Patents and Trademarks?"]

[Text] On the last day of January the "inauguration" of the new chairman of the Committee for Patents and Trademarks (Rospatent) of the Ministry of Science, the Higher School, and Technical Policy of the Russian Federation took place in Moscow. Minister B. Salytkov himself instilled in those present a belief in the bright future of Rospatent, having hinted at the end of his

speech that, while counting on state assistance, nevertheless every civil servant should remember the aphorism of the classic of the New Economic Policy period: "The rescue of a drowning man is the drowning man's own job."

Thus, a "new era" of Russian invention began. The collective now of Rospatent, which has been considerably rejuvenated and has been cut to less than one-third (as compared with the beginning of 1988), is being trained during the next cruise.

V. Rassokhin began his captaincy with the formation of the crew.

The rather decisive list of Rospatent toward the law is already evident from his first steps: Two legal administrations ("domestic" law, international law) immediately appeared simultaneously in the structure of the committee. Perhaps, another one is the limit—God likes a trinity.... If only as a result of this list they would not draw water and, of course, other, no less important problems would be washed over board. Unfortunately, with the arrival of the new "legal crew" such a turn of events seems very likely.

Today the situation in the area of invention is of a pronounced uncertain nature. The old State Patent Office has ceased the issuing of patents, while the new Rospatent does not have the right to resume it until the legislative settlement of the questions of the status of the protective documents issued by it and in general with respect to all procedural questions connected with the submission of applications for the registration of objects of industrial property (inventions, production prototypes, and trademarks). Of course, the exchange of previously issued inventor's certificates for patents was also suspended (until a special decision on this question is made)—because for the patent of what country is one to exchange a USSR inventor's certificate? If it is for a patent of the Russian Federation, what is to be done in the other sovereign states of the former Union? And although an announcement on the resumption of the acceptance of applications by Rospatent has already been published, it is raising many questions. It can serve with great reservations as a guide to action.

Russia proved to be in the best position. Practically all the basic resources of the former USSR State Patent Office were automatically transferred to its jurisdiction. But Russia also needs prompt actions in order to give declining domestic invention a boost.

First, this is the prompt solution of the problem of the "resuscitation" of the legal base of industrial property. Only one practicable means is clearly visible: the making of "cosmetic" changes in the recently passed union laws and their introduction on the territory of Russia by a presidential ukase. Ideally other sovereign innovations should also do the same thing simultaneously. However, their prospects are considerably more sickly. They do not have any serious material and technical base and specialists. This will require major capital investments and time

(from two to three years) for its establishment, as well as the training of national personnel. In my opinion, it is impracticable to solve the indicated problems in the immediate future. Although in places (for example, in the Ukraine) the establishment of their own patent offices has already been proclaimed.

Events that merit a separate discussion took place on the eve of the formation of Rospatent during the period of the elimination of the State Patent Office. The certification and registration of the first legal domestic patent attorneys took place. In the West the patent attorney is figure number one in operations on the legal protection of objects of industrial property. Precisely he draws up the applications for their submission to the patent office and is the agent of the author, the applicant, and then the patentee when solving all patent law problems that arise in the process of registering and exercising the exclusive rights to inventions and other objects of industrial property. Of course, he also has a very impressive salary that is in line with his position. Finally, the patent attorney is obliged to be a citizen of the country, in the patent law structures of which he represents his clients, and not to be linked by labor agreements with commercial and state structures.

It is precisely here that what happened in recent times in the State Patent Office is causing complete bewilderment. It is no laughing matter that a nonexistent organ of a nonexistent state certifies and registers patent attorneys of an unknown state in an unknown patent office.... Moreover, among those certified approximately one-fourth are personnel of the patent office itself. In the West it is categorically prohibited to do this even after dismissal from the patent office (at any rate within one year after dismissal).

"Their" moral and ethical problems, it appears, do not worry us. And an excuse has been stored away just in case. Who will dare to reproach the initiators of this venture in violation of the well-known prohibitive norms of the USSR Laws on Inventions and Production Prototypes? First, no one can say with certainty that the mentioned laws are still in force (although the same Russia declared itself the successor of the Union). Second, where, in what specific document is it stated that a worker of the patent office does not have the right to undergo certification as a patent attorney (for in accordance with the same laws he merely does not have the right to engage in the practice of a patent attorney)?... And these state defenders of the rights of inventors and patentees do not have time to worry that their actions are akin to a trivial abuse of office for selfish purposes.

Indeed, how else can the examination and certification for patent attorney by the commission, of which personnel of the patent department make up a good half, be assessed? And also that of the executives of the educational institute of the same office, that is, the institution that carries out the training of candidates for patent attorneys?

But how could representatives of the Soyuzpatent All-Union Association and the former All-Union Center of Patent Services, who certify themselves and their fellow workers, be members of the examination and certification commissions? In civilized countries the prerogative in the certification and registration of patent attorneys belongs only to the patent office and never to organs, which have an interest or carry out activity in this area, and their representatives. It would be good if what happened is merely a misunderstanding, the cost of the overall confusion. For the time being everything can still be put right. Only a desire is necessary.

Recent Decisions of Patents, Trademarks Committee

927A0161A Moscow *RADIKAL* in Russian
No 6, Feb 92 p 10

[Article under the rubric "Rospatent: Let Us Establish a Common Interstate Agency": "Report of the Committee for Patents and Trademarks of the Ministry of Science, the Higher School, and Technical Policy of the Russian Federation"]

[Text] In connection with the passage by the chambers of the Supreme Soviet of the Russian Federation in the first reading of the draft of the Patent Law, as well as taking into account the numerous appeals of domestic inventors, foreign patent offices, and patent lawyers, the Committee for Patents and Trademarks of the Ministry of Science, the Higher School, and Technical Policy of the Russian Federation (Rospatent) reports:

1. The provisions of USSR laws on inventions, production prototypes, and trademarks, which were adopted as the standard base by the states that are parties to the Interim Agreement on the Protection of Industrial Property, which was signed on 27 December 1991 in Minsk, will be used until the Patent Law and the Law on Trademarks take effect on the territory of the Russian Federation.

In accordance with the Interim Agreement the Russian Federation, just as the other participating states, recognizes the validity on the territory of the Russian Federation of the protective documents which were issued earlier on the basis of USSR laws.

Rospatent submitted to the government of the Russian Federation proposals on the promulgation of a standard act, by which the assumption by the Russian Federation of the indicated obligations, which follow from the Interim Agreement, will be confirmed. Such confirmation is a condition for the Interim Agreement to take effect.

2. Applicants, who earlier submitted applications for inventions, production prototypes, and trademarks to the USSR State Patent Office or submitted such applications to Rospatent, can, with the preservation of the date of priority, expect the taking of effect of the Interim Agreement on the Protection of Industrial Property, the

establishment on its basis of an Interstate Patent Office, and the specification of the procedures of its work on the issuing of interstate protective documents.

3. In accordance with the above-mentioned proposals of Rospatent to the government of the Russian Federation, after the Patent Law and the Law on Trademarks of the Russian Federation take effect the Russian Federation will grant the applicants, who wish to receive a patent (a trademark certificate), the right to solicit on the basis of submitted applications interim protection on the territory of the Russian Federation.

Interim protection will be granted for inventions, production prototypes, and trademarks with respect to the applications, on which expert conclusions on the possibility of the issuing of a patent (certificate) have been given, and will be established as of the date of publication of information on the application in a special Bulletin until the date of the issuing of the patent (certificate) of the Russian Federation.

The granting of interim protection on the territory of the Russian Federation will not be for the applicant an obstacle to the obtaining of an interstate patent (certificate) after the Interim Agreement on the Protection of Industrial Property takes effect.

4. In accordance with the Interim Agreement on the Protection of Industrial Property USSR inventor's certificates cannot be exchanged for the patents of individual states that are parties to the Interim Agreement. The issue of the exchange of inventor's certificates for interstate patents will be decided definitively during the drafting and conclusion of the Interstate Patent Convention.

In connection with this Rospatent does not carry out the exchange of inventor's certificates.

5. Applications for discoveries are not accepted, since this is not included in the functions of the Committee for Patents and Trademarks (Rospatent). The issue of the possibility of the legal protection of discoveries on the territory of the Russian Federation will be decided definitively during the passage of new civil legislation of the Russian Federation.

[Signed] Chairman of Rospatent V. Rassokhin

Patents, Trademarks Committee Chairman Reports Progress

927A0161B Moscow RADIKAL in Russian
No 6, Feb 92 p 10

[Interview with Vitaliy Rassokhin, chairman of the Committee for Patents and Trademarks of the Russian Federation, by RADIKAL special correspondent Marina Lapina under the rubric "Rospatent: Let Us Establish a Common Interstate Agency"; date and place not given: "The Era of the Silent Movie Has Already Passed, But the Era of the Talking Movie Has Not Yet Arrived"—first paragraph is RADIKAL introduction]

[Text] Vitaliy Rassokhin, chairman of the Committee for Patents and Trademarks of the Russian Federation, whom our special correspondent Marina Lapina interviews, described this way the present situation with invention and patenting in Russia.

[Lapina] Let us begin with the question of the functions of your agency.

[Rassokhin] Rospatent [the Committee for Patents and Trademarks of the Ministry of Science, the Higher School, and Technical Policy of the Russian Federation] is the successor of the State Committee for Inventions and Discoveries, subsequently the USSR State Patent Office, which dealt with the overall situation with invention in the country, the checking of the technical level of inventions, their introduction.... All these are no longer our functions.

There is the Russian Society of Inventors and Efficiency Experts. In the ministry of science they will deal with technical policy. It is another matter that we cannot keep aloof of these questions, although, in essence, the Committee for Patents and Trademarks deals only with applications for patents, inventions, production prototypes, and trademarks. Moreover, there are objects of intellectual property, which are new for us, these are software [in English followed by the Russian "programnyye produkty"—translator's note], as well as the layouts of integrated circuits.

An agency for the registration and protection of software and the layout of integrated circuits has already been established. It will be subordinate to Rospatent.

Our basic task is to establish a modern patent system of the European type.

The entire civilized world is now switching to a universal system, which presumes identical requirements for inventions and identical principles and forms of protection. A developed system of international patent cooperation already exists. It accepts international applications with an indication of the countries, in which the applicant would like to obtain a patent. In accordance with this application one of the agencies, which has been specified as the search organ, makes an examination here in Moscow—this is the All-Union Scientific Research Institute of State Patent Examination.

There are such search organs in Washington, Tokyo, The Hague, Munich, London—in all there are, it seems, 10 of them. The applicant submits the application where it is more convenient for him. The person, for whom it is more convenient to draw up an application in Russia, submits it to Moscow, as inventors from Eastern Europe have been doing to date.

[Lapina] By the way, how much is it necessary to pay, if the applicant submits the application to another country through a patent lawyer?

[Rassokhin] It is different everywhere. On the average, in order to submit an application, one needs on the order of \$1,000. Plus an examination, plus the obtaining of the patent itself, several other fees.... Altogether, several thousand dollars.

Now everyone has the right to decide himself where to submit an application. But before turning to some other country, Russians should submit the initial application to us, to Rospatent. The new Patent Law of Russia, the draft of which has been turned over to the Supreme Soviet, provides for this. In the United States, for example, strict liability is in effect for an inventor submitting an application in another country, without submitting it in the United States, if the invention was made on the territory of the United States....

[Lapina] But does the level of our examination satisfy international requirements?

[Rassokhin] Mainly only that part of the expert potential that worked on international applications in accordance with the patent cooperation agreement. It existed as if separately.

[Lapina] Is it necessary, it turns out, to retrain nearly all our experts?

[Rassokhin] But first it is necessary to get them a good wage, because the most skilled people are leaving for private firms, where they pay them a lot. In the West these are very high-paid specialists.

Earlier patents in our country were issued mainly to foreigners. They were issued to our citizens on only in those rare instances, when they were free inventors and did not work at state enterprises. There were, as you understand, almost not such people. They could hardly obtain a patent in our country—only an inventor's certificate. It as if attached some rights to the author, but they were not exercised: neither the right to a reward nor the right to housing benefits.... While the patent gives the sole right to dispose of an invention, to derive revenues from its use, which the inventor's certificate could not give and which in essence is precisely intellectual property. The essence of this concept, which in our country is interpreted in an absolutely arbitrary way, also consists in this.

Lawyers still call this an "exclusive right".... It is based, for example, on a patent or what in English is called a copyright [in English—translator's note]. In our country people do not always accurately understand this expression, which is incorrectly translated as the author's right. In reality this is the right to dispose of the author's work, to disseminate it, to derive income from this, and so on.

All these rights can belong by no means to the author. The same thing also goes for an invention. As a rule, an "exclusive right" belongs to the author. Firms, not inventors, dispose of the majority of patents, although an

application can be submitted only by an inventor. He simply transfers all the rights to the firm on specific terms.

It is a matter of so-called job-related inventions, although there is no such term in our law. In the West the right to the acquisition of a patent for such an invention in principle belongs to the firm, at which the inventor works.

Our inventors rose as one man against this, back when the Law on Invention in the USSR was being discussed. They demanded that all rights be given only to them. In such a case questions, about which they did not think, arise: What are entrepreneurs to do and what will happen with the inventor himself? Given such a system they will banish him from everywhere. Let this be his invention, but people, who are connected with the obtained result, work around him, he used official information, and so on.

All the terms should be specified in the contract when hiring. In it all your obligations to the firm and those of the firm to you are stipulated. If an inventor works for hire, our new patent law states that the employer has the right to use an invention on the condition of the payment of compensation to the author in the amount of the market price of a license. Thus both the rights of the inventor and the rights of the patentee will be guaranteed. While if someone were to risk piracy, the author can apply to the court. In all countries a system of sanctions for the illegal use of other people's inventions has been in effect for a long time. For the deliberate use of other people's inventions for personal profit one is threatened with imprisonment. In our country such a system for the present is not in effect.

Earlier an author, if the enterprise used an invention without his consent and even did not pay him, addressed to the committee the request to arbitrate and give protection. In a rule-of-law state, which we are trying to build, the author should apply directly to the court on the basis of prevailing legislation. Our inventors are not accustomed to going through the courts, and they, of course, will apply here, but I have explained our position.

The reward is a serious question, but it should not be stipulated by the patent law, although we cannot completely renounce it owing to the formed circumstances—after all, even the administration for the centralized payment of rewards has been transferred to us.

[Lapina] In my opinion, the law all the same will not be able to guarantee the rights of authors of inventions, who work for hire, as well as all our inventors. In case of hiring, as you noted, a contract, in which the rights and duties of both parties are stipulated, is concluded. In our country we have just taken up the contract system. Contracts are being introduced at random. At many firms and enterprises they even do not clearly know how to draw up a contract properly and competently, the people, who are being hired, also do not know this. In the

absence of a contract system the rights of potential inventors as before will not be guaranteed, they will not be insured against the arbitrary actions of the employer. Your law simply will not have an effect, like many of our laws.

[Rassokhin] When the patent law is passed in the Supreme Soviet, all employers will ponder the advantage of the contract system.

[Lapina] In my opinion, the introduction of a contract system should be primary, otherwise everything is in vain.

[Rassokhin] Yes, until a contract system exists, there is nothing to talk about. But thus far we also do not have a law. While the draft states that if you do not conclude a contract with the author on the right to use his invention, the patent will be issued to him. And let the directors of the enterprise consider themselves what is more advantageous.

According to the former Soviet law on invention all rights were actually given to the authors. While in the draft of the new Russian Law—the union law is no longer valid!—they recorded at my insistence not entirely that. The new law even provides for the following situation: Assume that the author and his firm have not come to an agreement and a conflict arose. In this case our draft law provides for the issuing of the patent to the author of the invention, although in the West it is not done that way. In spite of this patent, the enterprise will have the right to use the invention, but with the payment to the author of a reward, as is stated in the draft law, in the amount of the market price of a license. In the West such a concept as “fair compensation” is also in effect. The previous law in case of a conflict deprived the enterprise altogether of the opportunity to use the invention.

[Lapina] Now a purely practical question. While I was sitting in your reception room, there were many telephone calls regarding when you will begin your activity on the consideration of applications and the issuing of patents....

[Rassokhin] The era of the silent movie is over, but the era of the talking movie has not yet begun. The union patent is no longer valid, while there is not yet a Russian patent. We will resume activity after the passage of the Patent Law of Russia, which, as I hope, will be considered by the Supreme Soviet of the Russian Federation in February. Many inventors already have in their hands the decision of the patent office, and a patent will be issued sooner or later.

[Lapina] How will you organize interrelations with the former republics of the Union?

[Rassokhin] On the basis of contracts. Russia is the successor of the Union in matters of patenting. In no former republic are there the corresponding institutions that operate in accordance with the standards, which have been adopted by the World Intellectual Property Organization and are necessary for participation in the international patent system. The required structures exist only in Moscow. Everyone can use them. After all, not Armenia or Ukraine, but a specific inventor will submit applications for inventions. What difference does it make, who submits an application—an American, a Czech, a Lithuanian, or an Armenian?

A common interstate agency will be established. With our assistance, of course, it will also issue a common patent. The applicant, when submitting an application, will choose whether he is to receive only a Russian patent, which will be valid on the territory of Russia, or a common patent.

By the middle of the summer, I think, everything will be organized. We will begin to issue patents in batches. Provided there are no obstacles with paper and printing resources.

It was Mark Twain who said in his day that a country, in which there is no patent system and no established laws that protect the rights of an inventor, is like a crayfish, which can only crawl backwards or sideways. We also crawled that way.

Lack of Reforms in Ukrainian Academy of Sciences Criticized

927A0148A Kiev *VECHERNIY KIYEV* in Russian
26 Feb 92 p 1

[Article by Doctor of Philosophical Sciences Prof. Ivan Valko under the rubric "Point of View": "Paton Is Our Friend, But the Truth Is Dearer"]

[Text] In the search for a term to appraise my impressions from a 10-year acquaintance from inside with the life of the Academy of Sciences of the **former** Ukrainian SSR I understood that "academic totalitarianism" would be most precise. Indeed, in antiquity "Thoth" meant: "one of the most important deities, the patron of the sciences." While the adjective "totalitarian" is interpreted (in translation from Latin and French) as "all, whole," "connected with an openly terrorist dictatorship."

Thus, about academic totalitarianism. As in any totalitarian formation it goes back to the first person. Personally: to Boris Yevgenyevich Paton.

It is probably already apparent from other countries, to what totalitarianism in state-public life led. Only the thinking people, who work at the numerous institutes of the Academy of Sciences, as well as scientific personnel outside it know how harmful it is in the area of science. No matter with whom I spoke, everyone pointed out the longstanding grip of academic totalitarianism, which was harmful for Ukrainian science. And everyone, of course, hinted at the personality of the president of the Academy of Sciences. I was vexed, although I also agreed, for on a purely human level after all the time of work at the Academy of Sciences good feelings toward him remained.

However.... Paton is our friend, but the truth is dearer.

And the truth looks as follows. I already tried once to express it in the newspaper PRAVDA three years ago. But my response to the interview with B. Paton, which was published there, to this day "is being set up."

B. Paton with the help of correspondent M. Odinetz informed the world about such an organizational achievement in the area of science as the block of themes that are to be studied. Without belittling the importance of this, I expressed the wish to introduce first of all a corps of people on the threshold to the academy, so that not simply people, but individuals would create science within its wall. Then the block of themes would also be active.

I showed that much ballast—children, relatives, acquaintances, lovers of the party-state and scientific elite—"work" at institutes of the academy. Academic totalitarianism gives rise to academic elitism, while the latter is regenerative and life-saving soil for the former. An exclusive circle!

An incident comes to mind. One of the vice presidents, my immediate boss, for some reason was urgently

looking for me. I came to a meeting of the presidium of the Academy of Sciences. During the break: "Do you have a space?" I answered jokingly: "For you one will be found." The vice president is a serious man: "No, they called from Moscow regarding a space for a laboratory assistant." In about two weeks I received on a form of the presidium an additional estimate to the wage fund, and a likable person came punctually to the accounting department for money. After half a year she was already a graduate student.

When I shared this with my acquaintances, who had already eaten more than one pood of Paton's salt, they were surprised by my naivete, because a laboratory assistant is the first and a sure step to the academic elite. The dissertation is very quickly stuck together, and then there are free time and "idleness." True, it is not that way for everyone. But how difficult it is for truly conscientious people to get through.

When we took the examinations for graduate studies at institutes of the academy, they delivered the commission members, as they say, from out of nowhere, in order to convey "the mandatory instructions of the Central Committee." While in order to give such a person a grade of "5," it is necessary to "cut" someone. Of the several hundred matriculants not less than half came when the bell rang. About three years later these elite "scientists" told fortunes on academy directories, after a few years the lifetime position of corresponding member and academician holds a light for them. (The annual quota of positions by departments and the dates of birth of the people, who at the given moment hold them, are indicated in the directory.)

But only the colleague of an academician can criticism him. I got a lesson with respect to this, having barely crossed the threshold of science. A new subdivision—the division of scientific information—the organization of which they assigned to me, began to operate in the system of the academy, I should have also addressed the party meeting of the staff (approximately 200 people). As soon as I said that we would analyze publications and prepare conclusions and proposals for the purpose of improving scientific research work, angry voices fell upon me: "So then, will your candidates evaluate academicians?"

This is what I, a professional journalist and a science worker, saw the Ukrainian academy to be like. It is already nearly six years since I left it voluntarily. But according to the accounts of scientists, there have been no changes on the academic front. The readers of *VECHERNIY KIYEV*, including me, learned about this on 14 February from the article "The Law Is New. The Positions Are the Old Ones..." of V. Kuzmenko. The doctor of technical sciences writes: "The Academy of Sciences now is the only structure in the Ukraine, where a negligible minority dominates over an enormous majority."

Why is the minority, moreover, a negligible ones, succeeding in dominating over the majority, moreover, an enormous one? The reason: the centralized-imperial structure of management and the extreme financial poverty, which is making it stronger by the hour.

In my firm conviction, it is necessary to change the structure so that the mighty arsenal of science would be managed not by one, but by three copresidents" (the social, natural, and technical sciences). And so that not one leader would notify directors: "I have said everything—there is no money!" and then would quietly find it for.... And so that the triumvirate would decide the fate of every kopeck.

The vice presidents and members of the presidium are incapable in this matter. I worked with three vice presidents, who were in turn my immediate bosses. They all changed their voice beyond recognition when they heard on the receiver the voice of the president. (As did, incidentally, the chief of the science department of the Central Committee.)

Today UkSSR is no longer next to the abbreviation of the Academy of Sciences. But the "Berlin wall" remains in unified Ukrainian science. Therefore, for its destruction, for the sake of seeing to it that the young state of the Ukraine would not remain in the background of the civilized world with its mighty scientific potential, I want to appeal through the newspaper to Academic Paton:

Be the first to begin, Boris Yevgenyevich, the destruction of this wall, realize that the system, of which you together with thousands were a product, committed suicide, pass the steering wheel of science to no less wise copresidents. This, I am convinced, would be a display of a truly scientific approach to the organization of Ukrainian science and a contribution to its further mighty advance.

Kravchuk Measures Deemed Inadequate for Ukrainian Science

927A0134A Moscow POISK in Russian
No 8 (146), 15-21 Feb 92 p 5

[Interview with Vice President of the Academy of Sciences of the Ukraine Valeriy Pavlovich Kukhar, by Andrey Chirva, under the rubric "What Is the Academy of Sciences To Be Like?"; date not given (Kiev): "Priority to Science? One Would Like To Believe...."—first two paragraphs are POISK introduction]

[Text] Leonid Kravchuk promulgated the presidential ukase "On the Support of the Activity and Development of the Academy of Sciences of the Ukraine." How did the intelligentsia receive it? Will this document not become merely flimsy protection against the real adversities that are raining down on the scientific community?

Today at the request of the editorial office of POISK Vice President of the Academy of Sciences of the Ukraine Valeriy Kukhar reflects on this theme:

[Kukhar] Finally instead of the negligent attitude toward basic science, which has become traditional: There is no time for it!—we have heard that our research is of exceptional importance for the renewal of the state, Valeriy Pavlovich says. The functions of a coordinating body in the area of the basic sciences have been reserved for the Academy of Sciences. However, this status is traditional for any normal state. And it would be worth little, but for the other points in the ukase. For example, according to the document, the fixed capital and property of the academy have been placed at its free and permanent use.

After all, it is frightening even to imagine mass privatization at the academy. A moneybag, who picked up an institute that was sold by auction (this will hardly be people from the academic environment), will not rack his brains over how to preserve a scientific school. He will busy himself with what is profitable this minute. And then the fact that the Academy of Sciences of the Ukraine has a substantial pilot experimental base will be a misfortune for it—the threat of squandering will hang over these plants and design bureaus. But to auction off pilot sections and works means to undercut the future of science.

The ukase also envisages some stabilization in financial matters. After all, this is the paradox of our life: The state allocates from the treasury money for the Academy of Sciences, but then and there takes a portion of the assets in the form of a tax. By his ukase the president exempted the institutions, organizations, and enterprises of the Academy of Sciences from all types of taxes. There is an enormous stimulating force in this. A little earlier the parliament approved the Law on Science and Science and Technology Policy. Together with the presidential ukase it also envisages a lenient tax system for enterprises that invest assets in the innovation fund.

This is very important, because there are enormous difficulties with the budget for the academy. Whereas earlier half of it consisted of assets from economic contracts, now there are none of them at all. Enterprises, including defense enterprises, are also without assets. But the ukase enables scientists to participate in the work of the Cabinet of Ministers, and if we succeed in obtaining a certain percent of the deductions from the national income for science, it is possible to regard the policy of the top leadership as progressive.

Now about currency. Its shortage is inflicting a fatal wound. For example, now in world science biology and biotechnology are considered top-priority. We worked rather well, at the world level, but...on imported reagents. For domestic ones do not comply with world standards. The present lack of currency is a direct blow to the development of our biology.

What is more, due to the lack of currency we cannot now obtain foreign literature and scientific journals. This is literally cutting us off from the world scientific committee. Add here the present high cost of transportation

and you will understand that the problem of the "brain drain" at any moment will blaze with treble force. Moreover, in the most abnormal form. After all, if a scientist leaves the country and remains a researcher, this is a small loss, for he remains for world scientific progress. But in recent times capable researchers have been leaving for business, which has nothing to do with science.

The ukase of the president takes these features into account and—the first thing—reserves for the academy the right to dispose of the currency earned by institutes, it is not assessed taxes. And the second thing—moreover,

currency deductions from the state budget for the most advanced directions of our activity are envisaged. Incidentally, immediately after the appearance of the ukase the president met with associates of the academy, scientists told him about the developments, which they are not ashamed to present to the world as their own achievements. It will be possible, I think, to stimulate and further develop precisely these directions.

In short, with the appearance of this ukase there is a chance to raise the social status of the scientist and to help him fulfill his mission in society.

Belorussian AS President Criticized for Emigrating to U.S.

927A0164B Moscow LITERATURNAYA GAZETA
in Russian No 14, 1 Apr 92 p 2

[Article by LITERATURNAYA GAZETA correspondent Anatoliy Kozlovich: "Vladimir Platonov Got Tired of Praying. And He Left for America To Prepare a Mission to Mars"—first paragraph is LITERATURNAYA GAZETA introduction]

[Text] President of the Academy of Sciences of Belarus Vladimir Platonov has left. For the United States. Together with his family. The Belorussian press and the public have held him up to shame. For what? For that—for "flight," for "the betrayal of national interests."

The harsh verdict was aggravated by instances of shortcomings and transgressions, which were discovered by journalists in the creative and administrative biography of the talented academician and mathematician and, moreover, a longstanding favorite of the same journalists.

The presidium of the academy also came forth with an official statement of condemnation, in which it reported that in 1991 Vladimir Platonov spent six months on business trips to the FRG and the United States and that the presidium "bears some responsibility for the fact that it did not display proper adherence to principles and exactingness and allowed the president in practice to evade on his own the supervision of the academy."

The president knew what he was doing: Abroad he sought for himself for six months a reliable support, onto which it would be possible to step from the sinking ship. The Belorussian academy is sinking into the depths of the lack of money. Poverty. Experimental research has been halted. Well-known scientific schools are collapsing. Scientists are reinforcing the ranks of the unemployed. Those who have remained within the walls of the academy are being provided with 60 percent of the wage. The disintegration of the Academy of Sciences of Belarus, which has been forgotten and abandoned by its own government, is accelerating. One can no longer avert it without special steps. That is what well-known academicians, who the other day sent to the parliament of the republic their own entreaty for help, believe.

Academician Platonov got tired of praying. He wants to work normally. New successes to you, Vladimir Petrovich, in mathematics and algebra. Incidentally, the newspapers carried the report that Belorussian mathematician Platonov is working at one of the centers of the United States, which is preparing a mission to Mars. So, dear patriots, it is entirely possible to be proud of your countryman.

'POISK' Science News Briefs 21-27 Mar 92

927A0168A Moscow POISK in Russian
No 13 (151), 21-27 Mar 92 p 2

[Article]

[Text] Figure

In accordance with a decision of the Government of the Russian Federation \$12 million will be allocated to the RAS [the Russian Academy of Sciences] for the purchase of foreign scientific literature.

Quotation

"When the state asserts that it has no money for the support of education and for the protection of children, an image from Pushkin appears before me: '...and bloody boys before the eyes....' I do not know whether the complex of Tsar Boris is haunting our government...."

Deputy Minister of Education of Russia Aleksandr Asmolov

Fact

All the foreign trips of the leadership of the RAS this year have been made at the expense of the "receiving party." There is no money at the academy.

Russian Minister of Science, the Higher School, and Technical Policy B. Saltykov, just as the ministers of science of Hungary and Poland, has been admitted as an observer to the Committee for Science and Technology Policy of the Organization for Economic Cooperation and Development of the European Community. The "science" ministers of the EC countries are the members of the committee. The recommendations of the committee are mandatory for fulfillment in all the countries of the community.

At the last meeting of the committee, which was held in Paris, two issues were discussed: policy in the area of **big science** [in English—translator's note]—research that involves the use of superpower units like the Tokamak—and personnel problems. In these areas, in the opinion of B. Saltykov, Russia does not need help. He proposed to invest Russian "megascience" and to make its facilities international.

As a result the ministers of science of the EC and Eastern Europe came to an agreement on cooperation in the following directions: the practical training and increase of the skills of scientific personnel, the transfer of advanced technologies, the conversion of military specialties and military technologies, the development of systems of the sharing of information and experience on a bilateral and multilateral basis.

In the near future a center for the training for new occupations of scientists, who were involved in the production of means of mass destruction, will be established in Russia. An understanding on this was reached at a meeting of Minister of Foreign Affairs of the Russian Federation A. Kozyrev with President of the Council of European Communities D. Pineiro, Vice President of the European Commission F. Andriesson, and executives of foreign policy departments of the United States and Japan.

The center will be international—both Russian and foreign nuclear physicists, chemists, and biologists will be able to be retrained at it. The implementation of the project should begin at the end of March.

President of the RAS Academician Yu. Osipov and Chief Scientific Secretary Academician I. Makarov were in Paris on the invitation of UNESCO Director-General F. Meier. As a result memoranda on scientific cooperation between the RAS and UNESCO were signed.

The parties came to an understanding on UNESCO participation in the preparation of the International Program of Assistance to Russian Basic Science and in the establishment of the Fund of Russian Basic Sciences. Within the science sector of UNESCO a special group made up of representatives of the secretariat of this organization and the permanent representation of Russia to UNESCO is being set up.

An ukase of President Yeltsin, about which it will be useful for associates of some scientific laboratories and design bureaus to learn, has been published. It concerns products (operations, services) and production waste, the free sale of which is henceforth prohibited. On the "black" list are: uranium, other fissionable materials and items made of them, instruments and equipment using radioactive substances and isotopes, the results of scientific research and design work, as well as basic exploratory research on the development of weapons and military equipment, and scraps of radioactive materials.

At Moscow State University a meeting, at which the charter of the recently established Credit Union of the university was explained to students and instructors, was held. Its goals are to help "its own people" in the granting of credits and to protect their savings from inflation. Moreover, the Credit Union promises to supply both students and professors with some goods.

The amendments to the final version of the text of the Russian Law on Education were discussed at a meeting of the Committee for Science and Public Education under the Supreme Soviet of Russia. The second reading of the law, which was set for 27 March, for several organizational reasons was postponed to the end of April.

The conference "National Revival and Interethnic Harmony Through Education" was held in Khabarovsk. It was organized by the Ministry of Education of Russia and the International Fund for the Development of Small Nations. The associates of the Institute of National Problems of the Ministry of Education of Russia, teachers, and developers of school curricula, who came to Khabarovsk, discussed questions connected with the writing of textbooks, teaching, and the organization of the educational process at national schools of the Far East.

The Russian Center of Humanities Education is registering its first students—VUZ instructors of the social sciences and humanities, who intend to undergo training

for a new profession. They will be able to teach economics and business, political science and law, sociology and social psychology at colleges. On 24 March the first lecture for former social scientists was given. The theme was "The Concept of a Humanities Education."

'POISK' Science News Briefs 14-20 March 1992

927A0164A Moscow POISK in Russian
No 12 (150), 14-20 Mar 92 p 2

[Article]

[Text]

A meeting of the Council of Presidents of the Academies of Sciences of the republics that were a part of the USSR was held. The leaders of 11 academies participated in it (the presidents of the Academies of Sciences of Belarus, Armenia, Estonia, and Lithuania were unable to come).

The question of the subsequent fate of the council was at the center of the discussion. The opinions on this score differed. President of the Russian Academy of Sciences Yu. Osipov believes that it is possible to solve the basic problems in the interrelations of the academies on a bilateral basis. The majority of presidents expressed interest in retaining the council. President of the Ukrainian Academy of Sciences B. Paton advanced a compromise proposal, which was adopted: to discuss at sessions of the presidiums and at the general meetings of the academies the question of the advisability of establishing the Association of Academies of Sciences of the Countries That Are Former Republics of the USSR.

The draft of the charter of the association, which was prepared by a working group of the Academy of Sciences of Ukraine, was read at the meeting. It was also decided to discuss it at the national academies.

At the above-mentioned meeting the problem of the certification of scientific personnel, with which the Higher Certification Commission dealt earlier, was also discussed. With the transfer of this agency to the jurisdiction of Russia the question of who will certify doctoral dissertations in the other republics arose. In the majority of the new states scientists are of the opinion that it is necessary to retain common certification requirements on the territory of the former USSR. For the time being only the Higher Certification Commission is capable of carrying out certification in a high-quality manner. The presidents of the academy were at one in the opinion that it is expedient to establish under the Higher Certification Commission a department of international cooperation, which would coordinate "certification policy" in the independent states.

Students, who are going abroad along the lines of the Ministry of Education to undergo practical training, in accordance with the recently passed Law "On the State Duty" are exempt from the payment of the state duty for the issuing of foreign passports to them.

Among those, who will not pay the duty for the issuing to its associates of foreign passports to go abroad on official business, is the Joint Institute for Nuclear Research.

Another new law will be lenient toward "the gnawers of the granite of science." According to the Law "On the Income Tax From Natural Persons," "the amounts of stipends, which are received by undergraduates of higher educational institutions and students of secondary specialized and vocational and technical schools, which are paid by these educational institutions or are established by charitable foundations," are not liable to taxation.

The amount of the prizes named after prominent scientists, which are being awarded by the Russian Academy of Sciences as of 1 January 1992, will come to 5,000 rubles [R] (previously R2,000). That is what the presidium of the Russian Academy of Sciences decided. Will this figure remain unchanged for long during the time of the raging of inflation?

The presidium of the Russian Academy of Sciences recommended to the departments of the academy when establishing the amounts of the salary increases for executives of scientific institutions of the Russian Academy of Sciences "to proceed from the fact that the indicated increase should not exceed the average amount of such increases (as a percent of the salaries) of scientific associates for the institution as a whole."

The Main Financial and Economic Administration will see to it that the executives do not get too much out of touch with the collective—it has been charged to "analyze" the fulfillment of this decree.

Ninety percent of undergraduates are absolutely not satisfied with their material status, 63 percent are not satisfied with the level of the knowledge being acquired, while nearly all the students of tekhnikums and vocational and technical schools found their material status to be acceptable and the acquired skills to be satisfactory.

These are the data of the latest sociological study, with which associates of the Institute of Youth familiarized the participants in a round table on the social protection of students. The Moscow Federation of Trade Unions, which organized the discussion, invited to it representatives of the Ministry of Science, the Higher School, and Technical Policy and the Moscow Employment Department, trade union figures, and student leaders. The establishment of a special trade union organization—a student organization—was the discussion topic. A student trade union, in the opinion of experts, could contribute to the solution of problems which today, as sociologists believe, are causing "the social frustration of students." Questions concerning stipends and grants, the labor employment of students, and their job placement after completion of studies were also discussed.

The rumors that the Ministry of Education without unnecessary ado had prepared its own version of the Law on Education were not confirmed. The ministry of E. Dneprov worked only on amendments to several articles of

the draft law, which was written by a working group of the Supreme Soviet. Recently the members of this group had an opportunity to familiarize themselves with the results of the work of the ministry.

Students of secondary specialized educational institutions soon will be able to compete with undergraduates in marketing knowledge. Starting this year the specialties: "economic activity," "exchange activity," and "marketing," will be taught at vocational and technical schools and tekhnikums. Specialists in vocational and technical education believe that this will improve the "convertibility" of graduates of vocational and technical schools.

'POISK' Science News Briefs 7-13 March 1992

927A0158A Moscow POISK in Russian
No 11 (149), 7-13 Mar 92 p 2

[Article]

[Text] Quotation

"When scientists leave for commercial structures, this is not always a loss for society. After all, we don't need wild, but cultured, educated businessmen, who know languages and understand their job. The problem consists in the reproduction of scientific personnel..."

The Russian Intellectual Property Agency [RAIS] under the president will deal with the protection of copyrights in Russia. The RAIS is being established in accordance with an ukase of B. Yeltsin on the basis of the abolished USSR State Agency for Copyrights and Related Rights [GAASP]—the successor of the All-Union Copyright Agency. The RAIS will carry out the formulation of proposals and the implementation of state policy in the area of the legal protection of the results of creative activity in the sphere of literature, art, science, and so on.

The entire material base of the GAASP as of 1 January 1992 is being transferred to the RAIS, of which Mikhail Fedotov, deputy minister of the press and mass information of Russia, has been appointed director.

Nineteen works have been allowed to compete in the competition for the 1992 State Prizes of the Russian Federation in Science and Technology. In May the names of the winners will become known.

The Committee for State Prizes of Russia appeals to scientific production enterprises, associations, scientific institutions, higher educational institutions, scientific and technical societies, scientists and specialists, and the public at large to report their opinion on the works and the collectives of authors, which submitted them. The list of works was published in ROSSIYSKAYA GAZETA for 24 February.

The Russian Academy of Sciences, sectorial academies of sciences, state organs for science and technology, education, higher educational institutions, and other scientific organizations now by law are supposed to be concerned with ecology. In accordance with the recently passed Law

on the Protection of the Natural Environment these institutions will have to "draft and approve comprehensive programs and plans of scientific research in the area of the protection and improvement of the natural environment, the efficient use and reproduction of natural resources, as well as create the necessary conditions for effective ecological research and the introduction of the obtained results."

In accordance with the above-mentioned law the teaching of ecological knowledge at educational institutions will become mandatory. The fundamentals of ecological knowledge will be taught at all educational institutions, while the introduction of special courses on environmental protection and the efficient use of nature is envisaged at secondary specialized and higher educational institutions.

The conference "Ethnic Conflicts and Authority in Multi-Ethnic States" was held in Moscow. The United Nations University, the Institute of Ethnology and Anthropology of the Russian Academy of Sciences, and the Foreign Policy Association organized it. The origination, development, and transformation of conflicts and the methods of their resolution—this was spoken about in the reports of the most prominent domestic and foreign experts in conflicts. Among them were Dr. K. Rupesinghe (the Institute for the Study of Problems of Peace, Oslo), Dr. T. Uchido (the United Nations University), and V. Tishkov (director of the Institute of Ethnology and Anthropology of the Russian Academy of Sciences). The conference participants agreed in the opinion that it is practically impossible to resolve ethnic conflicts, it is important to know how to prevent them at an early stage and to avoid violence.

Our members of parliament also learned to prevent conflicts. The seminar "The Development of the Systems Approach in Conflict Resolution" was held at the White House under the aegis of Harvard Law School. This was a training seminar, at which deputies could "play a game of conflict" under the supervision of Harvard Law School Professors R. Fisher and U. Yuri. A round table, at which members of parliament shared information and impressions about real conflicts, of which we now have more than enough, was also held.

An agreement for 1992 has been concluded between the Ministry of Science, the Higher School, and Technical Policy of Russia and the Association of Trade Union Organizations of Students of the CIS [Commonwealth of Independent States]. It provides for "the implementation of a set of anticipatory steps on the social protection of students of higher educational institutions, the legal support of joint work of trade union structures with state organs, the efficient use of objects of the social sphere, the promotion of the employment of students in industry, the conducting of joint sociological research." The Committee for Education under the ministry will provide the association with financial assistance, will draft jointly with it and submit for consideration by the government proposals on social problems of the student

body, and will keep track of the efficient use of humanitarian aid. The Association of Trade Union Organizations of Students of the CIS, on its part, is participating in the resolution of social conflicts, which arise at higher educational institutions, and is preparing remarks on drafts of laws, which are being drawn up by the Committee for Education.

A commission, on which Deputy Chairman of the Committee for Education S. Valuyev, V. Ugorelov, chief of the department of the social development of the higher school, M. Volkov, an expert of the Central Council of Trade Unions of Public Education and Science, and student leaders S. Nikiforov and V. Potapov were included, was established for the monitoring of the fulfillment of the agreement.

At Moscow State University they are gradually adapting to survival under the new economic conditions. Recently the Studencheskiy Secondhand Store was opened on the student campus of Moscow State University. Students and associates of Moscow State University, as the advertising states, are served at it "on preferential terms": A commission of not more than 10 percent is collected from them. Moreover, students can leave at their store an order for clothing, shoes, dishes, and other essentials, which they need.

Vasilii Desyatnikov, governor of the city of Kirov, ordered the markup on the products of dining rooms, which serve vocational and technical schools and secondary specialized educational institutions, to be reduced to 30 percent. While the value-added tax is no longer being collected from student dining rooms.

Agreement Between S&T Labor Unions, Federal Institutions

927A0168B Moscow *RADIKAL* in Russian
No 8, 6 Mar 92 p 11

[Draft of "The Sectorial (Tariff) Agreement on the Securing of Socioeconomic and Legal Guarantees of the Personnel of Institutions of the Russian Academy of Sciences" of 21 February 1992 under the rubric "Reform in Science": "What Kind of Trade Union Should Russian Science Have?"—first paragraph is *RADIKAL* introduction]

[Text] We offer the reader the draft of the agreement between the Academy of Sciences, the Ministry of Science, and the Trade Union of Science. It was submitted for consideration to a joint working group, which was set up by the Moscow Trade Union of Workers of Science and Education and the Trade Union of Workers of Public Education and Science of the Russian Federation, was considered and supplemented, and was sent to the Ministry of Science, the Higher School, and Technical Policy and to the presidium of the RAS [the Russian Academy of Sciences].

Draft

**THE SECTORIAL (TARIFF) AGREEMENT ON THE
SECURING OF SOCIOECONOMIC AND LEGAL
GUARANTEES OF THE PERSONNEL OF INSTITU-
TIONS OF THE RUSSIAN ACADEMY OF SCIENCES**

1. General Provisions

1.1. This Agreement was concluded in conformity with Ukase No. 162 of the President of Russia "On the Securing of the Rights of Trade Unions Under the Conditions of the Transition to a Market Economy" of 26 October 1991, Ukase No. 212 of the President of Russian "On Social Partnership and the Resolution of Labor Disputes (Conflicts)" of 15 November 1991, Ukase No. 228 of the President of Russian "On the Organization of the Russian Academy of Sciences" of 21 November 1991, and the USSR Law "On Trade Unions, Rights, and Guarantees of Their Activity" (in the area that is not at variance with prevailing Russian legislation) for the purpose of implementing steps on the securing of socioeconomic and legal guarantees of the personnel of the institutions of the Russian Academy of Sciences (RAS) under the conditions of the economic reform.

1.2. The Agreement was concluded between the Ministry of Science, the Higher School, and Technical Policy (hereinafter the Ministry), which expresses the interests of the government of the Russian Federation, the presidium of the RAS (hereinafter the Presidium), and the Central Committee of the Trade Union of Workers of Public Education and Science of the Russian Federation (hereinafter the Trade Union). The effect of the agreement also applies to the members of other trade unions, which have delegated their rights to the conclusion of an agreement to the Trade Union.

1.3. The Agreement takes effect from the moment of its signing and is valid until the signing of a new agreement.

1.4. The results of the fulfillment of the Agreement during the past year are summarized no later than January of the current year by the tripartite commission. The results of the work of the commission (with possible remarks and reserved opinions) are reported at the General Meeting of the RAS, are brought to the notice of the primary trade union organizations, and are published in the press. Differences, which arise during the implementation of the Agreement, are resolved by the tripartite commission. Until the decision of the commission is given the parties refrain from unilateral actions.

1.5. The parties bear responsibility for the obligations assumed by them in accordance with the procedure established by prevailing legislation.

1.6. This Agreement does not rule out the possibility of agreements of the parties with other organizations provided only that such agreements do not reduce the scope and content of the rights of personnel of the RAS, which are established by this Agreement.

1.7. The primary trade union organizations of the RAS are the authorized representatives of the labor collectives of the enterprises, institutions, and organizations (hereinafter the organizations) of the RAS in case of the drafting and conclusion of collective agreements, the conducting of talks on questions of the remuneration of labor, employment, hiring, dismissal (including by way of the reduction of staffs and the number of workers), the offering of stock, and other forms of privatization, and the reorganization of organizations of the RAS. Collective agreements, which establish the rights of personnel of the RAS at a lower level than is stipulated by this Agreement, should be revised no later than one month from the moment of the signing of the Agreement.

1.8. Each of the parties has the right to submit proposals on the supplementing and amendment of this Agreement, which should be considered by the tripartite commission within 30 days from the moment of submission. The amendments and supplements, which have been adopted by the parties, become an integral part of this agreement from the moment of the signing of the decision of the tripartite commission.

1.9. Each party pledges to ensure the possibility of the presence of representatives of the parties to the Agreement at the meetings of its governing bodies without the right to vote.

2. The Mutual Obligations of the Parties

The parties pledge jointly:

2.1. To establish and maintain a data bank on the supply and demand of manpower by scientific and engineering specialties.

2.2. To establish and maintain an information and consultation center for personnel of the RAS for legal and economic questions, as well as for questions of cooperation with the new economic structures.

2.3. To establish and maintain an educational center for the advanced training of associates of the RAS in the most scarce specialties.

2.4. To establish a data bank of unrealized ideas and scientific and technical tasks.

2.5. To establish a joint expert council for the evaluation of drafts of laws, which affect the interests of personnel of the RAS, as well as for the development of the structure of legislation in the sphere of science and for the preparation of drafts of standard acts, including on the favorable taxation of institutions of the RAS (no later than the first half of 1992) and on the participation of the personnel of organizations, which are carried on the state budget, in the privatization of property. Each of the parties has the right to submit for consideration by the expert council drafts of standard documents.

2.6. To establish a commission for the analysis of standard documents, which regulate the activity of organizations of the RAS, for the purpose of the gradual abolition of obsolete restrictions. No later than December 1992 to publish a complete collection of prevailing standard documents. To continue the publication of *BYULLETEN TEKUSH-CHEGO ZAKONODATELSTVA*.

2.7. No later than December 1992 to publish a directory of foundations, which finance basic research in the Russian Federation and abroad.

2.8. No later than the second quarter to develop and put into effect a new system of salaries and wage rates of personnel of the RAS, which is the state guarantee of the minimum level of the remuneration of the labor of personnel according to the level of skill.

2.9. To draft the statute on the Fund for the Social Protection of Personnel of the RAS, having provided for state budget deductions to it in the amount of up to 1 percent of the budget of the RAS.

2.10. Not to allow the recertification of personnel of the RAS, who have been elected to the positions of chairmen of trade unions and their deputies (without the consent of the personnel) during their term of office and for two years from the moment of the termination of their elective powers.

The parties consider it expedient and express the intentions to carry out the following actions:

- to promote the conclusion of agreements of the RAS with the state banks of Russia on preferential lending to the organizations of the RAS;

- to draw up a package of recommendations on the conclusion of collective agreements at institutions of the RAS;

- to draw up a package of recommendations on the contractual agreement of the institution of the RAS and the associate, who is being enlisted in work under contract;

- to draft recommendations on the statutory documents of the commercial structures that are being established with the participation of institutions and/or personnel of the RAS;

- to draft standard documents and recommendations on questions of the leasing of property of the RAS.

For the realization of these intentions the parties establish working groups or other bodies with the participation of representatives of each of the parties.

3. The Obligations of the Ministry

The Ministry Pledges:

3.1. To maintain the amount of state budget financing of institutions of the RAS at a level that is not lower than the fourth quarter of 1991 in comparable prices.

3.2. Not less than once a quarter to make adjustments of the allocated amounts of financing with allowance for the increase of prices and inflation, having made available to the parties the method of calculation.

3.3. To find the necessary currency resources for the subscription to scientific literature by institutions of the RAS and for the acquisition of drugs by medical institutions of the RAS.

3.4. No later than two weeks before the submission for consideration by the government of the Russian Federation of questions, which affect the interests of personnel of the RAS, to send to the parties drafts of the corresponding decisions for examination.

3.5. No later than three days after the making by the government of the Russian Federation of decisions, which affect the interests of personnel of the RAS, to send to the parties copies of these decisions.

3.6. To ensure the start of the operation of the Basic Research Fund of the Russian Federation no later than the first half of 1992.

3.7. To provide for the necessary allocations for the maintenance and construction of facilities of the social infrastructure of the RAS at a level that is not lower than the municipal level.

3.8. Not to allow the change of the specialization and the elimination of enterprises of the sociocultural sphere of the RAS without the consent of the parties.

3.9. To settle at the government level the question of the indexing of the assets that are being channeled into fieldwork and expeditionary work.

4. The Obligations of the Presidium of the RAS

The presidium of the RAS pledges:

4.1. To ensure an average level of the remuneration of the labor of scientific personnel of the RAS, which is not lower than the average level of professors and instructions of higher educational institutions.

4.2. No later than three days after the making of the decision on the distribution of state resources by items of the estimate to the departments of the RAS, regional departments, and scientific centers to send to the parties copies of the corresponding decisions.

4.3. To oblige the departments of the RAS (regional departments) and the management of the scientific centers of the RAS within three days after the making of decisions on the distribution of state resources among the institutions of the RAS to send copies of these decisions to the trade union committees of the corresponding institutions.

4.4. To oblige the executives of institutions of the RAS:

- within three days after the making of the decision on the distribution of state resources among the subdivisions of

the institution to send copies of the decisions to the trade union committee of the institution;

—not less than once a quarter to review and adjust the breakdown of the assets of the state budget by items of expenditures and to send copies of the corresponding decisions, as well as information on the use of the estimates of expenditures to the trade union committees of the institutions;

—to establish the amount of the overhead of the institution only after the consideration and approval by the academic (scientific and technical) council and trade union committee of the institution of the item-by-item estimate of expenditures;

—to conduct jointly with the trade union committees of the institutions an inventory of the property of the institutions;

—to examine jointly with the trade union committees and the academic (scientific and technical) councils the charters and other constituent documents of the commercial structures, which have been established with the participation of institutions of the RAS, and the contracts for the leasing of property of institutions of the RAS, as well as to hear the reports on the activity of the commercial structures which have been established with the participation of institutions of the RAS;

—to draft and adopt no later than the second quarter of 1992 new charters of the scientific research institutes of the RAS, which conform to "The Basic Principles of the Organization and Activity of Scientific Research Institutes of the Russian Academy of Sciences," as well as to hold elections of the governing bodies of the scientific research institutes of the RAS.

4.5. To submit to the trade union committees for approval the orders on the payment of bonuses to the managerial personnel of institutions of the RAS.

4.6. To draft jointly with the Trade Union and to introduce not later than the first half of 1992 a statute on the granting of separate personal accounts to the subdivisions of the scientific institutions of the RAS and to the collectives, which have received financing on a competitive basis or are performing contractual work, having stipulated in it the procedure of the reduction of overhead as the amounts of received financing increase.

4.7. To establish that the introduction of the contract system of hiring and the remuneration of labor at the institutions of the RAS is possible if the appropriate entry is present in the collective agreement. The switching of a worker of an institution of the RAS to the contract system of the remuneration of labor is carried out with the consent of the worker and the trade union committee of the institution.

4.8. In the absence of sufficient assets of the state budget for the carrying out of the statutory activity of the

scientific institutions of the RAS to establish the following procedure of the elimination of the shortage of assets:

—at the joint meeting of the academic council and the trade union committee (in the absence of an academic council at the joint meeting of the board of directors and the trade union committee) of the institution the item-by-item estimate of expenditures of the institution is examined for the purpose of finding reserves and the structure of the institution is also examined for the purpose of reorganizing inefficiently working subdivisions (including governing bodies);

—the switching of the subdivisions, which do not have other assets aside from the assets of base state budget financing, to a shortened work week (with the consent of the worker) with the retention of the hourly wage rates of associates is carried out;

—a certification commission with equal representation of the members, who are appointed by the director of the institution, and the members, who are elected by the general meeting (conference) of the collective of the institution, within the competence of which is the making of the decision on the dismissal of an associate or on the further shortening of his work week, is established;

—a job placement commission, which conducts a search for a new workplace for the dismissed associate or sends him to an educational retraining center, is established at the institution.

4.9. A conclusion on the incompatibility of a scientific associate, who has been elected by the academic council of the institution to the held position, is possible if there is a decision of the academic council and the trade union committee of the institution, which has been approved by the Department (Regional Department) of the RAS.

4.10. To publish the results of the analysis of work injuries at the institutions of the RAS during 1991 and the proposed steps on their prevention, including the decrease of workplaces with harmful and particularly harmful working conditions.

4.11. To elaborate and publish a set of measures on the development of the infrastructure of the RAS, which is concerned with the recovery and burial of toxic wastes.

5. The Obligations of the Central Committee of the Trade Union

5.1 To contribute to the prevention and resolution of labor disputes on the basis of prevailing legislation, collective contracts, and agreements.

5.2. To notify the parties of the organization of mass measures which involve the possibility of the change of the daily routine of the organizations of the RAS.

5.3. To aid the conducting of independent examinations for the evaluation of the activity of individual workers and collectives in case of the necessity of their defense.

5.4. To bring to the notice of the primary trade union organizations the information, which is made available to the Trade Union by the parties, to promote its discussion in the collectives with the subsequent generalization of the opinions of the collectives. To bring to the notice of the parties the expressed opinions.

5.5. To conduct at a time, which has been agreed upon by the parties, an examination of projects that have been submitted in accordance with this agreement.

5.6. To perform regularly work on the identification and prevention of social conflicts at the institutions of the RAS and to bring the available information to the notice of the parties.

5.7. By the forces of the technical labor inspectorate to carry out the constant monitoring and to give organizational assistance to the collectives of the institutions of the RAS in the creation of healthy and safe working conditions and the assimilation of the allocations that are earmarked for these purposes.

We ask that remarks and additions to the draft be sent to the editorial office of RADIKAL.

Scientists Polled on 'Brain Drain' Issues

927A0169A Moscow RADIKAL in Russian
No 8, 6 Mar 92 p 10

[Article by Galina Saganenko under the rubric "The Brain Drain": "Contracts for Scientists: Pro and Con"—first paragraph is RADIKAL introduction]

[Text] A study on this theme was conducted at the end of last year by the Institute of Sociopolitical Research of the USSR Academy of Sciences under the direction of Academician G. Osipov. Among the respondents a third are academicians, two-thirds are corresponding members, 68 are directors of institutes, and five are directors of joint ventures; the average age is 67 (12 under the age of 55, 28 over the age of 70).

The respondents link nearly all the problems of our science with the problem of the "brain drain." Inasmuch as this is not so much an independent phenomenon as a consequence of the overall instability in society and the troubles in science, it is difficult to regulate this process directly. And the scientists did not attempt to give specific suggestions. Everything will depend on the change of the situation in society, the attitude of society

toward science, and, of course, on certain changes of the mechanisms that operate within science. The ratio of these positions can be estimated as 3:5:2.

The factors of the "brain drain" in themselves say almost nothing about the attitude toward the opportunity to work abroad. To the direct, "blind" question "What do you think of our scientists working abroad?" the respondents replied:

I approve of our scientists working abroad, I do not see obvious negative aspects in this	56%
I approve of such work, although I see appreciable negative aspects (if it is not difficult, explain what kind)	33%
As a whole I am opposed to the extensive dissemination of such a system for our scientists (explain, please, why)	7%
Did not reply at all	5%

More than half unconditionally support it, a significant portion see serious problems first of all in the fact that this mechanism does direct harm to domestic science (16 people) and actually is a means of the "transfer of brains" abroad (20 people). There are several remarks regarding the fact that such work causes certain losses for scientists themselves and is useless for the country. Perhaps, in this connection it is worth citing the statement of a corresponding member and physicist: "As a whole I am opposed, if one means practical training, inasmuch as the conditions there and here are substantially different. Therefore, the experience acquired there is not usable in our country, while the obtained results, as a rule, have no bearing on our tasks."

Often we put our trust in mechanisms of the organization of science, which work successfully in other countries. Among them are the system of grants and the contract system of the hiring of specialists. Will the contract system help, for example, to solve several problems of the functioning of science and to check the "brain drain"?

The proposed alternatives for the response are: "Certainly, switch to this system"; "As a whole I support it—it is necessary to switch to this system, but it is necessary to take the specific circumstances into account"; "It is unacceptable for us." The responses were chosen in the following ratio: 14 percent, 66 percent, 11 percent (8 percent did not respond).

Moreover, a "blind" question about the potential positive and negative consequences of the introduction of the contract in our science was offered.

Positive Aspects:	
it will make it possible to get rid of the "ballast"	59%
to bring in line the labor of a scientist and his pay	41%
to increase the effectiveness of academic research	42%
it is justified in the system of strategic research	48%
healthy competition among scientists appears	32%
it will make the process of managing science easier	16%
Negative Aspects:	
it is less suitable in the system of basic research	61%
it will enable more "go-getting" people to be promoted	40%
it will create the dependence of the scientist on the "employer"	38%
it will cause unemployment among scientists	37%
unhealthy competition among scientists will appear	31%

There is no strong preponderance of the positive assessments. There are opposed to the number of people, who believe that healthy competition is appearing, just as many people who see the threat of the appearance of unhealthy competition. To the 59 percent of those people, who believe that this system will make it possible to get rid of the ballast in collectives, there are 40 percent of those people, who note that this system will enable "go-getting" people rather than skilled people to be promoted.

Moreover, 17 people considered it necessary to supplement the set of notions about the contract system in the area of its "negatives." Here are a number of statements:

"The system of contracts in the West was developed and improved over the decades...and is yielding positive results. The attempt to introduce this system in our country in a few years will lead to enormous, if not irreversible, consequences and losses." "The contract system is pointless, if science is not a subject of concern of the state." "The changeover is destructive for science, if they impose the theme of the contract on the scientist. It is another matter if there is a free theme, which has been thought up by the scientist and is supported by a contract."

"This system is not suitable in the basic sciences." "The dissociation of scientific collectives." "There will be many negative aspects, if administrative and management structures act as the client." "If the Academy of Sciences concludes contracts, the likelihood of a clan system in science is high; the financing of 'one's own' themes, the restriction of outlying regions."

Scientist Defends Military-Industrial Complex

927A0141B Moscow SOVETSKAYA ROSSIYA
in Russian 5 Mar 92 p 2

[Article by Doctor of Technical Sciences Georgiy Kostin under the rubric "Views, Positions" (Voronezh): "Defense Without Myths"]

[Text] The phenomenal myth of the military-industrial complex appeared soon after the announcement by the leadership of the country of the policy of switching to the path of market relations. Since then it has been actively exploited by politicians and economists, dilettantes and adventurers.

This exploitation is based on three postulates, on three characteristics of the military-industrial complex, which supposedly do not require proof:

- as the main "devourer" of economic resources (priority scientific supply, unlimited uncontrollable investments, the best materials and equipment, the highest wage and social privileges...);
- as the manufacturer of products that are useless for society and the country;
- as the bearer of a scientific and technical potential, which was built up by the efforts of all the people and is capable (if it wants to or if it is forced to) of satisfying in the shortest time by means of conversion the immediate interests of people and of flooding the counters of stores with goods.

The emphases of statements and publications changed subject to the circumstances and social orders, but their essence remained unchanged.

The sober voices of specialists, who tried to provide objective and correct information about the size, role, and capabilities of the military-industrial complex and about the principles and effectiveness of conversion, were literally drowned in the powerful and discordant, but surprisingly unanimous chorus of "leading" economists and political populists.

Later, when incompetent conversion yielded the first fruits of the destruction of the unique wealth of the country and in so doing absolutely did not live up to the hopes placed in it, the tone of the information on this theme was transformed somewhat.

After the trivial assessment of the role and capabilities of the military-industrial complex and the forecast of conversion there began, as is customary in our country, a campaign to find "witches" and "saboteurs." The opponents of the economic programs of perestroika, the authors of alternative programs, the managers of enterprises, who for many years had created bit by bit the scientific production potential of the state, and simply patriotically disposed people were grouped with them without particular distinction. But inasmuch as there obviously were not enough arguments and accusations, an entirely democratic arsenal of means of reprisal was set into motion: branding through the very "independent" press, elections on an alternative basis, demagoguery about self-management, and so on. Some people stood their ground, others left. The pace of the collapse of enterprises being converted increased, the return from conversion, which was low as it was, decreased. The economic programs of perestroika continued to fail one after another.

Unfortunately, the myths about the military-industrial complex also continue to exist. We do not want to give up the fairytale. We are still waiting for a magic tablecloth and are hoping for a game of I spy. But childhood ends sooner or later for everyone and real concerns and specific duties fall on one's shoulders. And the most important one of them is the future generation. What will we pass on to it? Real values or mere verbiage? A state or colonial rags?

Thus, how realistic are the myths? I will cite several figures of the expenditures of economic resources in 1990.

The share of the fixed production capital of the military-industrial complex: for the national economy as a whole—6.4 percent in industry—12.6 percent.

The share of imported equipment in the active portion of productive capital: on the average for the country—22.2 percent, in the military-industrial complex—17.9 percent, in civilian machine building—27.2 percent, in the chemical and timber complex—35.0 percent. The consumption by the military-industrial complex of rolled ferrous metal products—9.8 percent. The consumption by the military-industrial complex of polystyrene—38.1 percent, including in military equipment—2.7 percent.

It is possible to take the data for a narrower area of the military-industrial complex—for space hardware, which was subjected to simply destructive criticism for the "squandering" of national wealth.

The space budget in 1989 came to R6.9 billion. At the same time the amount of unfinished construction for the country as a whole came to R180.9 billion (26-fold more), the above-standard balances of commodity stocks came to R247 billions (35-fold more), grain losses—R20 billion, meat losses—R6 million, nonproduction losses—R24 billion

I have in front of me hundreds of figures, and no combination of them confirms the myth about the "voracity" of the military-industrial complex and about the fact that the channeling of its resources into other sectors of the economy will make it possible to cover the deficit of the economy.

A proper examination of the myth about the products of the military-industrial complex also leads to the same conclusion.

In 1990 the share of the output of individual items and commodities of the military-industrial complex came to: machine tools—15 percent, rigs for petroleum and gas production—32.4 percent, streetcars—86.4 percent, household electric ranges—72.2 percent, computer equipment—85 percent, rolled aluminum products—93 percent, radio receivers, televisions, video tape recorders, sewing machines, cameras—100 percent, refrigerators—92.7 percent.

It is possible to extend the list. Looking at it, you automatically ask the question: Who created and for what purpose the myth about the uselessness of the products of the military-industrial complex?

The cited data also answer in part a third question: about the possibility of using the scientific production potential of the military-industrial complex. It is necessary first of all to provide resources and to increase the volumes of already assimilated products.

Life has demonstrated that the deeper we went into conversion, the more optimism gave way to pessimism. The ambiguity of the forecasts of conversion are characteristic not only of our country, but also of any state that has military products. In the United States, for example, when examining the negative aspects of conversion, they put into first place not the negative economic balance, but the need to transfer about 600,000 skilled specialists to production with a lower level of technology. Our assessment of conversion is primitively simple. There is a great scientific production potential which ensures the output of complex, science-intensive, reliable, and competitive products. The military order was withdrawn, and products of civilian orientation were obtained. But inasmuch as the latter are simpler, their volume should be larger. But in practice everything is the other way round: neither good items nor production volumes nor an economic impact.

The point is that the production capacities being converted have strictly defined technological characteristics. They were set up for specific, as a rule, unique items, were provided with high-precision, expensive, but often narrowly specialized equipment, and have the greatest scientific production potential, highly skilled personnel, and their own concept of the organization of production. This makes it possible to develop and produce particularly precise and power-intensive items with the maximum reliability characteristics. But these works are absolutely unsuitable for the mass production of simple and inexpensive items.

From this there follows, I would say, **the first law of conversion:** The technological characteristics of the items being assimilated should be identical to the characteristics of the works that is being converted. The observance of this rule will make it possible to maintain the scientific and production potential and the interest of the personnel and will make it possible to have the minimum start-up expenditures on the organization of the production of new items and the minimum time of their assimilation, the maximum profitability.

Are there items which it is advisable to produce at capacities that are being converted? In any case there are such ones, the production of which yields the minimum losses. But if here one poses the task of producing a new generation of items that substantially exceed the achieved world level of quality, conversion will become profitable.

The second most important problem of conversion is the organization of production. Since the times of Petr I principles of production, which ensure the reliability of military equipment, have been developed in Russia and are in effect to this day. Similar systems also exist in foreign practice. All of them, by giving priority to the reliability and competitive ability of products, to put it mildly, are not concerned about their profitability.

At our enterprise back in 1988 the concept of the organization of smooth-flowing sequential production, which makes it possible to reduce substantially the expenditures on the production of the most complex, including military, equipment without any decrease whatsoever of its reliability and design characteristics, was developed and defended. A theory of conversion was developed in practice. Given invariable resources the new principle of the organization of production makes it possible to increase its volume by nearly 25 percent, to reduce the amount of "unfinished work" by more than 30 percent, and to free about 450 workers per R100 million of products in 1991 prices.

The third requirement when carrying out conversion is compensation for the reduction of production. It is necessary for the maintenance of the reliability of the remaining military equipment, for the maintenance of science-intensive production, and for the possibility of the intensive assimilation of new items.

It is possible to confirm all this with specific examples.

Our enterprise obtained the order of one American firm for the production in accordance with its specifications of items for petroleum and gas production. The world level of these products with certification in the United States was achieved by us when producing the test batch.

The optimization of the chemical composition and the technological process of casting, which was carried out by the time of the output of the second batch of items, made it possible to supply items with the exceeding of the world level with respect to the basic characteristic by 14 percent. After the optimization of the technological

process of heat treatment the third batch of items is being supplied with the exceeding of the characteristics by 30 percent. And less than two years were required for all this.

When assimilating through conversion machines for meat processing—choppers—we were deprived of the opportunity to purchase a license for the basic element of the item—a block of knives. We spent two years on the development of the design and technology of the knives, which ensures the world level of quality (certification of the FRG). During the next two years the level with respect to the basic parameter—the volume of output processed until dulling—was exceeded first by 25 percent and by the beginning of 1992 by twofold. The products are being supplied to leading West European firms.

What is needed so that these examples would become the rule and so that the unique scientific production potential of the country would place its shoulders under our shaky economy?

First of all let us talk in the language of figures, not emotions. Let us speak the truth, even if someone does not like it.

It is necessary to set a long-range task for the military-industrial complex and to provide for it if only the minimum resources. In the United States, for example, the orders for complex science-intensive products are drawn up five years in advance, we do not have an order for 1992.

And a final thing. State enterprises have finally obtained rights that are nearly equal with other subjects of the economy. This is good. They have begun to call the managers of enterprises businessmen. This is also rather good. We are not afraid of tasks, we are accustomed to responsibility.

But, perhaps, that is enough throwing mud at us, that is enough sparing, we have had enough spreading from above and from below of useless inspecting and distributing structures. Perhaps, it is time, at last, while calling us businessmen, to give us the proper rights of state businessmen. It is time for the current government of Russia to understand that the time of its life depends first of all on reliance on the maker of products. And the greater the potential of the latter is, the more efficient the organization of his production is, and the more skilled people are, the greater the certainty is of the fulfillment of the programs and promises of those who rely on him.

Scientists Polled on 'Commercialization' of Science

927A0169B Moscow *RADIKAL* in Russian
No 10, Mar 92 p 10

[Article by Candidate of Philosophical Sciences Galina Saganenko under the rubric "Science and the Market: "The Advantages and Disadvantages of Commercialization"]

[Text] Associates of the academy of sciences are looking anxiously at their uncertain future. One of the hopes is the idea of the commercialization of science.

Two hundred academicians and corresponding members of the USSR Academy of Sciences responded in September-December 1991 to the questionnaire "The Situation in the Social Sciences." The poll was conducted by the Institute of Sociopolitical Research of the USSR Academy of Sciences under the direction of Academician G. Osipov. More than a third of the questions concerned science as a whole and the process of its commercialization. Among the respondents a third are academicians and the rest are corresponding members. The average age is 67, here 19 people are not more than 55 years old, 40 people are over the age of 75.

The Sources of the Financing of Science

Here we will present the information that was obtained in the responses to the following projective question: "What should the optimum financing of the social sciences look like? Try to formulate your answer, having distributed 100 percent of the required amount of financing among various sources: state budget allocations, commercial activity and economic contractual work, sponsorship and financing by interested structures, other sources."

The responses were broken down among these three columns as follows: 60 percent, 19.5 percent, 19 percent, 1.7 percent.

In principle commercialization and sponsorship are regarded as essential sources of the financial support of social science (and, so it seems to us, the sphere of scientific activity proper). In particular, on the average one-fifth is allotted to commercialization, but for 23 people (13 percent of those who responded to the question) far more space is allotted to it—for the existence of science. It is possible to regard this information as some quantitative evidence of the "favorable disposition" toward the commercialization of science.

What the attitude is toward the present real process of the commercialization of our science is another matter.

Statements of Scientists About the Process of the Commercialization of Science

In this case we will try to present and describe the information from the following threefold question: "We are very interested in your opinion about the process of the commercialization of science, which has been occurring of late. What in this process is good and bad?"

One hundred thirty people expressed their opinion, having designated 102 replies on the line "good" and 119 on the line "bad."

The 102 replies "about the good" were focused around several themes. In the reasoning of the scientists the following twofold theme is visualized as most significant: "to understand the questions of society and the usefulness of a job for society" and "the introduction of applied developments."

The second theme of the statements concerns the fact that commercialization promotes the intensification of the work of researchers. The third theme is pay. Here there are 17 replies about the fact that the increase of wages occurs and about the possibility to earn a living, to improve the well-being of scientists, to receive additional pay, and others.

Finally, the theme about commercialization as the promotion of the development of science. Here a portion of the statements are simply about the material support of science ("additional allocations," "it is possible to work without having adequate support," "the possibility of obtaining additional equipment and allocations," and others), while a portion are about the possibilities of the expansion of scientific research, the taking up of completely new problems, and aid to basic science. In all there are 16 statements.

On Several Possibilities of Scientific Activity in Connection With Its Commercialization

The question was as follows: "With which of the offered opinions about the commercialization of science do you agree?" We offered six paired wordings.

We got responses in the following ratio:

The commercialization of science:

1) aids the study of basic problems—diverts one from study	12:147
2) increases the possibility of using the creative potential—limits the use of the creative potential of scientists	53:80
3) makes it possible to develop among scientists a healthy spirit of enterprise—causes unhealthy job-stocking and a spirit of enterprise, which is contraindicated to science	37:102
4) contributes to the depth of analysis of problems in connection with potential competition—gives rise to opportunism in the selection of problems, the superficiality of developments	30:111
5) makes it possible to pay adequately for the labor of scientists—gives rise to the inadequate differentiation of the material level of scientists	63:82
6) helps to solve the problem of the technical equipment of research—does not solve the problem of technical equipment	115:31

As we see, in any comparison the choice of a negative opinion preponderates. Only the evaluation of the possibilities of technical equipment in case of commercialization yielded an exception.

Thus, a general conclusion about the evaluations and opinions of the academicians and corresponding members concerning the commercialization of science. This process is inevitable and necessary and has certain possibilities. However, it by no means satisfies an overwhelming portion of the scientists, who attempted to evaluate its various parameters and the situation as a whole. As much as this state is alarming, the situation with the commercialization of science differs from its various forms, which we see around us and which, alas, for the present give no pleasure, what the consequences of this situation will be in the future—such questions, undoubtedly, should be analyzed. It is necessary to seek humane and adequate forms of this process and to moderate its negative effects—the anxiety of scientists with the forming situation merits serious treatment.

'POISK' Science News Briefs 29 Feb-6 Mar 92

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No 10 (148), 29 Feb-6 Mar 92

[Article]

[Text] The Do Not Change Directors at the Crossing

Yekaterinburg—The presidium of the Ural Department of the RAS [the Russian Academy of Sciences] made the decision on the organization on the basis of the Scientific Engineering Center of Ecological Safety in Yekaterinburg of a new institute. For the present they have conditionally named it the institute of industrial ecology.

Doctor of Physical Mathematical Sciences Viktor Chukanov, former director of the center, was appointed director. No one had doubts when selecting the candidate for this post. For precisely Chukanov at one time organized a thorough examination of the zone of the regrettable famous 1957 catastrophe at the Mayak Production Association and in the shortest time achieved the adoption and financing of a state program on the elimination of the consequences of this accident.

Perhaps, It Will Be Reconciled

Minsk—In Minsk at the suggestion of the coordinating council of the strike movement of workers of education and science a meeting of the leaders of this movement with deputies of the Supreme Soviet and with members of the government of the republic was held. A conciliation commission, which will draw up a program for recovering from the formed situation, has been established. The republic parliament intends to examine the raised problems at the next session, which will begin its work on 11 March. Until this time the coordinating council has decided not to resort to extreme protest measures.

They Calculated—They Shed a Few Tears

Minsk—At the Belorussian Vysheyskaya Shkola Publishing House they calculated that given the present prices for paper one textbook will cost an undergraduate of a higher educational institution approximately 100 rubles. The crisis at the book publishing house due to the exorbitant prices for raw materials and typographic services has fallen first of all upon noncommercial structures—educational and scientific. The program of the publication of national textbooks is on the verge of failure. Of the several tens of planned publications only two have appeared. The other day the directors of all state publishing houses appealed to the republic authorities to take steps promptly to save the national book publishing house.

The work on the Russian Law on Education is nearing completion. At the meeting of the Committee for Science and Public Education of the Supreme Soviet of the Russian Federation its latest version was submitted to the committee members. In the three months, which have passed since the first reading, the working group that prepared the law made more than 1,000 amendments. Ten new articles have been included in the text. The prepared document will be submitted for familiarization to N. Malyshev, state adviser for science and the higher school, the Ministry of Science, the Higher School, and Technical Policy, the Ministry of Education, and a number of committees of the Supreme Soviet.

A meeting of the board of the Association of Trade Union Organizations of Students of the CIS [Commonwealth of Independent States] was held in Bishkek. The association leaders discussed the details of the forthcoming action "Student Solidarity-92." An appeal to the leadership of the CIS was adopted. The coordination of the solution of student problems on the entire territory of the CIS is necessary, it is stated in it. The increase of the stipend in Kazakhstan by more than twofold as compared with Russia soon will "be responded to" by mass strikes of Russian students. The student leaders are also demanding the settlement of the question of the convertibility of diplomas within the CIS and the procedure of payment for the instruction of "foreign" students at the university centers of Russia.

The Scientific Council of Moscow State University made the decision to hold on 23 March the election of a new rector of Moscow University and approved the Statute on the procedure of its conducting. The nomination of candidates will take place at the general meetings of science teachers of all the faculties. One of the conditions of the competition: The future rector should have a length of service in science at Moscow State University of not less than five years.

On 9 March 1992 the scientific council of the university on the representation of the commission for the conducting of the election of the rector will register the candidates. During the period from 10 to 21 March they will be able to advance their programs to the voters.

The contact telephone number of the commission for the conducting of the election: 939-21-01.

The Institute of Economic and International Problems of the Development of the Ocean of the Far Eastern Department of the Russian Academy of Sciences is being eliminated. The presidium of the Russian Academy of Sciences made the decision on this. Under the conditions of strict financial discipline at the academy such a science as "the economy of the ocean" has become, apparently, insufficiently economical. A portion of the scientific potential of the institute should go to other institutions—the presidium of the Russian Academy of Sciences recommended to the presidium of the Far Eastern Department to consider the question of the possibility of organizing within the Institute of Economic Research of the Far Eastern Department of a division for the study of the foreign economic problems of the Asian-Pacific Region.

The presidium of the RAS [Russian Academy of Sciences] adopted a decree on the next changes of the names of academic institutes. The Institute of History of the USSR was renamed the Institute of Russian History, while the All-Union Center of Mathematical Simulation was renamed the Institute of Mathematical Simulation of the RAS.

The next conference of the Association for the Promotion of Pedagogical Education will be held on 17-20 March in the suburban Moscow city of Sofrino. This time the conference will be "international," for its members now represent various countries of the CIS. This also determined the agenda of the conference: Educators will decide how their association is to live under the new conditions. Specialists in the field of law, economics, and management have been invited.

Telephone inquiries: 246-07-64.

The Russian Economics Academy imeni G. Plekhanov obtained 12 broker seats, having become the founder of the Central Russian Universal Exchange.

The practical science conference "The Meeting of the Educational Requirements of Germans in the Russian Federation" has concluded in the city of Slavgorod of Altay Kray. Among its organizers were the Ministry of Education of Russia, the Interstate Council for the Rehabilitation of Germans of the Former USSR, the Goethe Institute (the FRG), the FDA-Buro (the FRG), and the Committee for Public Education of Altay Kray.

The conference participants together with education specialists from the FRG discussed the problems connected with the history of culture of Germans of Russia, the interaction of the cultures of small nations, and the peculiarities of the national German school in the Altay and other regions of the CIS. The colleagues from Russia and the FRG were able to visit a national German school, a kindergarten, and a pedagogical institution in the German district of the Altay.

The Press and Information Department has been organized in the Ministry of Education of the Russian Federation. S. Tsimbalenko, a former worker of the YUN-PRESS Agency, is in charge of it.

'POISK' Science News Briefs 22-28 February 1992

927A0141A Moscow POISK in Russian
No 9 (147), 22-28 Feb 92 p 2

[Article]

[Text] Figure

About 300,000 "imported" scientists and specialists will be needed by the United States by 2000. About 600,000-700,000 of its own will be trained.

Quotation

"The higher school always remembered that it exists on the people's money and always set itself the task to give the people as many cultural and scientific forces as possible. Here it turns out that the higher school all the same is not democratic only because it has not opened its doors before the street. One must not forget that given this influx from the street of those people, who thirst for elementary knowledge, there is the risk of lowering the summit."

M. Menzber, rector of Moscow State University, 1918

Fact

The Ministry of Science, the Higher School, and Technical Policy does not have enough currency even to take from the country the foreign students who have completed their studies. Recently the agreement that they will be taken out in empty airplanes at one-fourth the price was concluded with the Ministry of Transportation.

Both chambers of the Supreme Soviet of the Russian Federation passed in the first reading laws on intellectual property. The second reading, after the inclusion in the draft of remarks and additions, is planned for the end of March.

The Committee for Science and Public Education of the Supreme Soviet formed a working group that will deal with the preparation of the draft of the copyright.

A meeting of the presidents of the Academies of Sciences of the states of Central Asia and Azerbaijan is planned for 3-4 March. It should be held in Tashkent. The discussion of the following issues is proposed: the coordination of the activity of the academies and the formulation of a position with respect to possible association with the other academies of the Commonwealth of Independent States, the problems of the certification of scientific personnel.

A conference of directors of sectorial and territorial scientific and technical information centers was held in the Ministry of Science, the Higher School, and Technical Policy of Russia. The situation, in which scientific and

technical information centers have found themselves since the elimination of ministries, and the problems of financing, which have arisen in connection with this, were discussed. About 180 million rubles [R] (in 1991 prices) will be needed by the centers for the continuation of their activity. The Ministry of Science, the Higher School, and Technical Policy is unable to allocate such an amount. Only the maintenance at the former level of the financing of those centers, which earlier were also replenished from the Russian budget, was promised. The others will have to convert to cost accounting.

The Orgella Foreign Trade Firm has organized in Moscow the University of Foreign Economic Knowledge. The first group of 30 students has already been enrolled. All interested people can enroll. The term of instruction is a month. Classes are conducted in the evening. Among the instructors: experienced specialists from the Ministry of Finance, the customs service, and the State Tax Inspectorate. The fee for the course comes to a little more than R5,000.

"For the purpose of increasing the creative activity" of young scientists and undergraduates of higher educational institutions the presidium of the RAN [the Russian Academy of Sciences] adopted the new Statute on Medals of the RAN for these categories. Now for the best scientific works 12 medals with prizes in the amount of R2,000 (previously nine medals and R200) will be presented to young scientists and 12 medals with prizes in the amount of R1,500 (previously nine and R200) will be presented to undergraduates of higher educational institutions.

The session of the general meeting of the RAN will be held on 7 and 8 April. The drafts of the Basic Principles of the Organization and Activity of the Scientific Research Institute of the RAN and the Statute on the Legal Regime of the Property of the RAN will be discussed. The election of the vice presidents of the RAN for the biological and social sciences and the members of the presidium of the RAN will be held, the academician secretaries of the Mathematics Department and the Problems of Machine Building, Mechanics, and Control Processes department will be approved.

The presidium of the RAN approved the amounts, which in accordance with the plan of the financing of scientific institutions of the RAN will be allocated to the departments of the academy during the first quarter. The Mathematics Department will receive the least of all—R4.4 million. The Literature and Language Department will get R9.5 million. And here is the triad of the most "highly paid" departments: the General and Technical Chemistry Department—R73.1 million, the Information Science, Computer Technology, and Automation Department—R73.6 million, the General Physics and Astronomy Department—R151 million.

The presidium of the RAN granted the Physical Chemistry and Technology of Inorganic Materials Department

the rights of a legal entity. Now the department can have a current account and a currency account at the bank.

For the first time in the history of the Philosophy Faculty of Moscow State University the delivery of the series of lectures "An Introduction to Orthodox Theology" has begun in the Department of Religion. Priest Andrey Kurayev is delivering them.

Scientists Polled on Post-Communist Trends in Science

927A0149A *Moscow RADIKAL in Russian*
No 5, Feb 92 p 10

[Article by Candidate of Economic Sciences Leonid Kosals, lead scientific associate of the International Center of Studies of Economic Reforms, under the rubric "Science and Economic Freedom": "And Did You Join the Merchants?"—first two paragraphs are RADIKAL introduction]

[Text] Should one allow "peddlers" into the temple of science? To what extent is this infiltration permissible? What forms of organization and financing correspond to the specific nature of scientific labor?

A sociological study on this theme was conducted in the summer of 1991 in Moscow at four scientific research institutes by L. Kosals, lead scientific associate of the International Center of Studies of Economic Reforms, to the order of the former USSR State Committee for Science and Technology within the framework of the international scientific project "The Management of Science and Technology Under the Conditions of the Transition to a Market Economy" (the directors: S. Glazyev of the Russian Federation, R. Levin of the United States). At two sectorial (civilian) scientific research institutes, one defense scientific research institute, and one academic scientific research institute 162 managers of laboratories, sectors, departments, and the board of directors were surveyed on a wide range of problems, which concern the economic status of the scientific research institute, competition in the sphere of research and development, the orientation toward various forms of ownership, and others.

Science, which in its previous form proved to be unnecessary to post-communist society, has been faced with the task of survival. What are the conditions of this survival? There are, in my opinion, three basic ones:

- 1) the development of scientific products, which are competitive on the international and domestic markets;
- 2) the capability of scientific collectives and organizations to change their structure and forms of activity and to establish organizations of a new type, which are based on various forms of ownership;

3) the availability of scientists and businessmen, who are capable of achieving scientific and business success under the conditions of a changing society.

Let us begin with quality. More than a third of the surveyed managers maintained that the jobs being performed by their laboratories correspond to international standards; 58 percent—they correspond to the union level; 8 percent—they are lower than this level.

The arbitrary nature of an evaluation of this sort is obvious. Therefore, we also talked with several managers personally. They confirmed that they have competitive developments. Moreover, in responding to the question: "How has the quality of the scientific products, which are made by your subdivision, changed in the last five to six years?" the managers noted (percent):

Changes did not occur	35
Quality improved	41
Quality worsened	24

The trend of the change of the quality of scientific products as a whole is favorable, and this is in spite of the fact that, to use the expression of one of the managers of the scientific research institutes, the most complex experiments, which require the observance of precise methods and conditions, have to be conducted "on our knees."

In science, as nowhere else, the results depends on the attitude of people toward their work. Unfortunately, judging from the obtained data, as a whole it is worsening (percent):

The attitude toward work in the collective did not change	26
It improved	28
It worsened	46

This worsening does not affect the results of work immediately. But if the noted trend develops, even additional financing will not save state scientific research institutes: By means of money it is possible to improve working conditions, but it is impossible to regain the lost interest in creative activity. This has its own reasons. In particular, scientists have been forced to engage more and more not in science proper, but in unimportant, from the scientific standpoint, applied development.

Evidence of this is the assessments by managers of the distribution of allocations for advanced and exploratory operations and their assessments of what it should be.

Direction of financing	Is being spent at present (percent)	Should be spent for the normal development of the scientific research institute (percent)
On applied development	77	57
On exploratory operations	23	43
Total	100	100

To use the expression of many respondents, we are "eating away" now the scientific reserve that was built up over many years and even decades. The respondents are very dissatisfied with the present distribution of allocations for exploratory and applied operations, which, in the opinion of the majority, it is necessary to change substantially in favor of the former, so that organizations could develop normally later.

The fate of scientific organizations now depends in many respects on the relations with superior departments—sectorial ministries, the Russian Academy of Sciences, and others.

More than half of the respondents believe that given all the existing drawbacks it is necessary to retain the existing subordination of their scientific research institutes. One-tenth believe that it is necessary to change it. And only a little more than a third of the managers are for the withdrawal of the scientific research institute from the departmental system and the transformation of the institute into an independent organization. Moreover, in their opinion, the collectives think the same thing.

The defense scientific research institute shows the greatest attachment to its ministry, then comes the academic scientific research institute, five-sixths of the managers of which want to remain within their departments. The situation is the opposite with sectorial institutes, where more than half of the respondents believe that their organizations should withdraw from the departmental system.

Now the situation is forming in such a way that, in spite of the reluctance of many managers and collectives "to go free," some of them all the same will have to do this, inasmuch as closing is in full swing. We proposed this situation and asked a question, which in this case will inevitably face the collective: "What changes in the form of ownership and so on is it necessary to carry out so that the scientific research institute could exist as an independent organization?"

According to the responses, the version of the retention of the scientific research institute as a unified organization and the establishment on its basis of a joint-stock company enjoys the greatest popularity. A smaller, but still significant number of votes were cast for the division of the institute into several independent organizations. The other versions of the change of the status of

the scientific research institute (with the exception, perhaps, of the switch to leasing) are far less appealing. Let us particularly note the very small share of supporters of the merging of scientific research institutes with higher educational institutions and the relatively large share of supporters of the sale of a scientific research institute to a foreign firm.

At sectorial scientific research institutes for the most part they prefer the joint-stock form of ownership and are striving harder for the preservation of the integrity of organizations, while a significant portion of the managers of the defense and academic scientific research institutes believe that under the conditions of a "departmentless" existence their institutes will have to be divided into several organizations.

"What do you think, what are the prospects of your organization, if it withdraws from the jurisdiction of superior organs?" we asked the experts. Their assessments were divided (percent):

The scientific research institute will improve its position	36
It will worsen its position	27
It will disintegrate	23
Nothing will change	14

As a whole the managers have specific aims at changes in the fate of their organizations. It is possible to assume that if scientific research institutes are removed from the subordination of ministries, their managers will try to establish in place of the old institutes joint-stock companies, that is, they will take the same path that many enterprises of physical production are now taking. But the joint-stock form of ownership is most suitable for large organizations that produce large batches of products that enjoy a stable consumer demand. It is not suitable for scientific institutions, at which a significant portion of the work does not provide a commercial return or provides it in the distant future.

Therefore, when "scientific joint-stock companies" are established, they will, perhaps, rather quickly cease to engage in science and will begin commercial activity. Otherwise they will simply cease to exist.

The withdrawal of institutes from the departmental system may stimulate the process of the establishment of private research firms. In order to ascertain whether among scientists there are many who wish to establish such firms, they were asked: "Do you want to establish a private research organization?" Twenty two percent of the respondents answered affirmatively. If this estimate is correct and if one considers that the number of scientific subdivisions at institutes of Russia comes to about 50,000, the number of potential entrepreneurs just among managers may be about 10,000.

Commentary on International 'Brain Drain' Conference

927A0166A Moscow *RADIKAL* in Russian
No 7, Feb 92 p 11

[Article by *RADIKAL* commentator Marina Lapina: "They Are Helping—the Strong"—first two paragraphs are *RADIKAL* introduction]

[Text] The international conference "The Brain Drain Under the Conditions of Present-Day Russia: Domestic and International Aspects," which was organized by the Russian National Committee for the Problem "The Brain Drain," the UNESCO regional bureau for science and technology for Europe, and the Russian Commission for UNESCO Affairs, recently concluded its work in Moscow.

An attempt at the comprehensive analysis of the problem was made for the first time. Our commentary Marina Lapina shares her impressions of the conference.

Academician N. Moiseyev, who opened the conference, immediately attempted to introduce a constructive element in the discussion, having expressed not new, but specific ideas of the establishment of an "intellectual exchange," a system of the placement in our country of orders of western firms, and so forth, the discussion of which has been going on for a long time at all levels. The academician tried not so much to familiarize colleagues with his proposals as to define the keynote of the dialog.

The data of sociological surveys, which were cited at the conference, were obtained by various methods and made possible to draw sometimes opposite conclusions: from entirely optimistic ones (the scale of the 'drain' is not that great and the consequences are not that catastrophic) to ones that cause one utter dejection. The second type of assessments, of course, prevailed. But as Corresponding Member of the Russian Academy of Sciences G. Ivanitskiy correctly noted, "statistics are a variety of lie, and it is not worth getting carried away by them." As proof he cited the following example. At the Pushchino Biological Center 40 people went abroad to work. With regard to 20 of them it is possible to say "thank God," with regard to 15 it is a pity, with regard to three it is a great pity, while the departure of two is catastrophic.

The concept of S. Kara-Murza, chief scientific associate of the Analytical Center of the Russian Academy of Sciences, on moderating the consequences of the "brain drain" (the prevention of this process is impossible and, besides, is not necessary) is based on an indisputable postulate. In the civilian society of the future, which we are trying to build, no one needs science in the form of the gigantic monster which existed in our state. This inefficient organism, in the opinion of "all our ideologists and spiritual pastors," will have to be destroyed in order to build something more compact and viable. Here Sergey Georgiyevich directed attention to the statement of B. Yeltsin that our state will support only basic

science. "In essence the state has declared that it is abandoning the support of 90 percent of our scientific potential."

What is it possible to do in order to preserve, as Kara-Murza expressed himself, the gene pool of Russian science? It is necessary to transform some scientific collectives, which connect us by an umbilical cord with the world scientific community, into kinds of spores, having reduced them to reasonable limits. The money, which has been allocated today for science, must be spent only to the sustaining of these spores, while not at all orienting them without fail toward a specific end result. Thereby it is possible as if to freeze science for a while until better times, and then to transplant the "cell-spores" into the body of the future civilian society.

The troublemaking report of economist Leonid Malkov, deputy general director of the Soviet-American Paragraf Joint Venture and simultaneously an associate of the Central Institute of Economics and Mathematics, was of a different nature. By the acknowledgment of the scientist-businessman himself, it was of a somewhat provocative nature. The bewilderment with regard to the excessive dramatization of events and the optimism in connection with the possibility of turning the process of the "brain drain" to the advantage of our science succeeded the customary funeral intonations regarding those who had left, which had again seized the audience.

It was not effective according to any of the generally accepted criteria (the citation index, the number of Nobel Prizes, and so forth), at any rate with respect to the ratio of the expenditures and results. The overproduction of scientists is present in Russia. Why is it necessary to make a tragedy, if several tens of thousands of them will be leaving?

The elimination of overproduction in itself is an achievement.

Of what Malkov said (we will try to familiarize the readers of *RADIKAL* with his thoughts in greater detail) one opinion, which concerns western aid to our science, deserves, in my opinion, special attention. In the West they prefer to give aid not to the weak, but to the strong. If you talk all the time about your own feebleness, several times they will give you, perhaps, alms, but you ought not count on serious support and cooperation.

Malkov to some extent made easier the task of his colleague from Novosibirsk, Yu. Masharov, who poured oil on the fire with the statement: "While we here calculate and predict, the problem of the 'brain drain' in practice has already ceased to exist. Nearly everyone who could has already left. It is necessary to settle the question on a different level. It is time to talk the conditions that are necessary for the reemigration of the scientists who left." And he set forth his idea as specifically as it is possible to do this. His account about the establishment near the Novosibirsk Academy Campus of a business incubator for scientists interested not only the

conference participants, but also the few foreign journalists who were present during the discussion.

But can the "brain drain" have some value equivalent? Is it possible to calculate the "cost" of a specialist? It turns out that in the West such calculations have already been made for a long time, specific methods exist, and some countries, mainly developing countries, lay claim against the consuming countries for the amounts of harm that has been done to them due to the drain of personnel. The report on this of Candidate of Economic Sciences S. Dolmatova, a scientific associate of the Institute of World Economics and International Relations, went almost unnoticed. And it is a pity. It was one of the most nontrivial reports regarding the approach to the problem.

The discussion of the question of the "brain drain" on the pages of our periodical reduces in practice to the

potential departure from the country of our specialists who possess nuclear secrets. However strange it is, this aspect practically was not discussed at the conference, although representatives of the defense complex attended it and spoke about their problems. This fact, in my opinion, testifies that the supercharging of passions over this problem is not entirely justified, although there are grounds for thought. We are becoming, it appears, witnesses of the origin of the next myth, the justification for which is seen only in the fact that we will hardly be able to save by ourselves our intellectual potential.

The statement of Prof. A. Rakitov, science adviser of President Yeltsin, who attempted to formulate in what, strictly speaking, he sees the ultimate task of the conference, became the final accord of the conference.

Joint Venture To Translate, Distribute Russian S&T Literature

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No 8 (146), 15-21 Feb 92 p 3

[Interview with Dr. Lazar Papernik, vice president of Pleiades Publishing, Inc., chief of the Russian representation, Michael Solton, general director of Interperiodika, and Natalya Shapiro, public relations director, by a POISK correspondent, under the rubric "At the World Level"; date and place not given: "Journals: The Landing in the United States"—first two paragraphs are POISK introduction]

[Text] The Interperiodika Publishing House intends to deliver scientific information promptly from Russia to the West.

Superb printing, highly professional translation into English, the most rapid information—these are the basic qualities of the scientific journals, which Interperiodika is publishing for foreign readers. A POISK correspondent addressed to the management of the publishing house the request to tell about the activity of the firm, which is new for us.

[Papernik] Interperiodika is a joint venture which was established on the initiative of the Russian Academy of Sciences. On the American side Pleiades Publishing, the offspring of General Media, which is well known for its popular magazines OMNI and COMPUTE, and Allen Press, one of the largest publishing houses, was its cofounder.

How did foreign editions of our scientific journals appear until recently? First, the path of scientific articles to publication was very thorny. As a result of red tape at various stages materials lay in departments and editorial offices for months, or else years. Then—you would not say otherwise—a predatory, barbaric contract was concluded. The well-known All-Union Copyright Agency—VAAP—represented the interests of scientists. And when the Russian version appear, they sent it abroad. There they pulled it to pieces. They distributed them to translators. After translation they sent them to the printing plant. Moreover, the quality of printing left much to be desired. It reached the point of being ridiculous: They cut out the formulas from the Russian-language edition, which has been set by hand at our printing plants, and pasted them on the galley proofs. Today, when looking through these journals, one can only be appalled.

But many foreign libraries were forced to subscribe to these publications. And at high prices. The journal PHYSICAL REVIEW, which is well known to the entire world scientific community, costs a subscriber from the American Physical Society \$150 a year. With a printing of several thousand copies. Meanwhile, an annual subscription to some publications of the academy in the English-language version costs about 1.5-fold more. The

printing does not exceed several hundred copies. Moreover, scientists and editorial offices got almost nothing from this money. The bureaucrats of the VAAP were more interested in frequent and "fruitful" foreign business trips, but not at all in the protection of the rights of the scientists who were the authors.

We have drastically transformed the technology. Today our English-language journals at times lead in publication their Russian-language colleagues. The secret here is that we now work not with the finished journal, but directly with the manuscript. And this became possible, I will note, owing precisely to the establishment of Interperiodika.

In all 150 people work for us. Moreover, perhaps, the best specialists in Moscow: doctors and candidates of sciences. Then the material goes through editing. After this it is turned over to style checkers. Journalists, staff members of embassies, and science attaches work for us as style checkers. In general, people who have a professional knowledge of the language. The text, which has been prepared for publication, is turned over for computer typesetting. Right here—in Moscow—we make the make-up pages. And we send the films for printing to the States.

Speed, quality—this is not everything. There is also another advantage. The author is afforded an opportunity to work with the text at all the stages of its preparation. Up to the proofreading of the final galley proofs.

For all this I would not want people to perceive us as some good samaritans. They say, they felt sorry for Russian scientists, they came to their aid. Across the ocean there is no rich complacent uncle. The project on the publication of journals is a commercial affair. For the present it is not yielding us a particular profit. But we are expanding production and are outlining some prospects.

[Solton] In principle, today Interperiodika is performing an important communications role. Scientific journals of the academy back in the 1950's became the supplier of objective scientific information for western scientists. However, together with the destruction of the old administrative management structures this thin, in essence, thread of contact of the two scientific communities was very nearly broken.

Together with freedom in economics and politics, it seems, the direct opportunity appeared for any group of scientists to go to western consumers with their own publication. What does it cost, assume, to get the material together, to prepare it for publication, and to print it somewhere in Tver? And to send the printing—about 20,000 copies—directly to the United States, for example. Indeed, all this, perhaps, is very complicated. But, after all, it is a matter here not of the printing industry and not of the printing plant. For publishing is a business. And it is organized according to specific laws.

Assume that once you succeeded in sending the printing on time. But the next time the mail got disrupted. Subscribers did not receive the journal on time. Thus, complaints were received. The authority of the publishing house decreased. And how will you seek these subscribers? Where? And imagine that you did not receive money for the journals. To whom will you turn? Who will protect your financial interests? And what about the copyright?

Our partner in Pleiades Publishing—Allen Press—is one of the leaders in such activity. It distributes up to 500 titles of scientific publications. Among them, for example, is the most popular publication of Macmillan—the magazine *NATURE*. Our distributor prints and sends all the journals of the Academy of Sciences to the addresses known to it. And it does this, judging from reports, extremely skillfully.

Of course, journals are just our first steps on the scientific information market. With time we intend to begin the publication of outstanding works of Russian scientists, current works, and materials of scientific symposiums and conferences. We have the forces and resources for this.

[Shapiro] Of course, we do not intend to publish everything in quick succession. Interperiodika through its western partners is constantly studying the market of scientific journals in the West. First of all these are recognized libraries, which owing to the nature of their activity should subscribe to all scientific publications, regardless of their quality. Then there are library consortiums, such as those at Oxford, where about 70 educational institutions are concentrated. The libraries of large universities, such as Harvard, subscribe to many journals. And another mass consumer is information companies, which are compelled to constantly consolidate and update databases.

However, still the circulation of academic journals in the United States is small. It rarely exceeds 200 copies. An exception, perhaps, is the series of *ZHURNAL EKSPERIMENTALNOY FIZIKI*, *PISMA V ZHURNAL EKSPERIMENTALNOY FIZIKI*, and *USPEKHI FIZICHESKIKH NAUK*. There is a demand in general for descriptive journals of the series *USPEKHI*.... There is stable subscription to mathematics and physics journals. As well as in the area of geology and soil science.

For all this we have already been compelled to abandon the publication of several journals. Some due to the excessive arrogance of the founders, others due to the lack of punctuality and lack of discipline of the editorial offices in deadlines.

And I would like to talk about another thing. It is time for our journals to review their strategy. At times they are filled with monotonous materials, which change nothing in the attitude to the world. The articles lack a dynamic character and scientific topicality. The time has come, it seems, to draw into them works of foreign scientists. In any case, many people in the West would agree to such collaboration.

In principle, I think, updating will also affect this sphere of activity of scientists. New journals and new directions will appear. And then we will be willing to accept them in our translated press. Let the founders merely find their position with the approximate contingent of potential readers and give us the annotation to their journal. We will work together.

From the Editor: POISK intends to support the initiative of the American publishers. For our science will hold out in the present complicated economic situation only if it receives the support of foreign sponsors and grants and takes part in joint projects. While for this abroad they should know its capabilities well.

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